

ABSTRACT

Title of Dissertation:

USING MINDFULNESS TO REDUCE
OCCUPATIONAL STRESS AND BURNOUT
IN MUSIC TEACHERS: A RANDOMIZED
CONTROLLED TRIAL

Dana Arbaugh Varona, PhD, 2019

Dissertation directed by:

Dr. Michael P. Hewitt and Dr. Stephanie
Prichard, School of Music

The purpose of this study was to examine the effects of a mindfulness-based intervention (MBI) on K-12 music educators' self-reported responses to occupational stress and burnout. Secondary purposes were (a) to explore the experiences of K-12 music educators who underwent a four-week web-based MBI; and (b) to determine if there were any potential relations between participants' demographic and descriptive data and their pretest levels of self-reported responses to occupational stress and burnout. Two hundred fifty in-service music teachers were randomly assigned to either the treatment or waitlist-control group. Treatment group participants ($n = 90$) underwent a four-week online MBI known as the Mindfulness Training for Music Educators (MTME). Waitlist-control group participants ($n = 160$) were not provided with any mindfulness training but were given full access to the MTME following completion of the study. All participants completed assessments of self-reported

responses to occupational stress and burnout at pretest, midpoint, and posttest. Following completion of the MTME, treatment group participants provided data regarding their experiences with the MTME and its feasibility. Results of mixed effects regression suggested that treatment group participants reported significantly steeper decreases in responses to occupational stress and burnout than waitlist-control group participants. Cross-sectional analyses at pretest indicated that age, female gender, salary dissatisfaction, perceived lack of administrative support, and perceived lack of parental support were significant predictors of increased responses to occupational stress, while teaching secondary school, salary dissatisfaction, perceived lack of administrative support, and perceived lack of parental support were significant predictors of increased responses to burnout. For each additional extracurricular hour worked beyond the school day, there was small but significant decrease in burnout. During the intervention period, the treatment group participants experienced a variety of occupational stressors including managing students, major events, interpersonal conflict, scheduling issues, and illness. Participants primarily responded to occupational stress with emotion-focused coping strategies such as breathing and meditation. Overall, treatment group participants found the MTME to be feasible for reducing stress and burnout while working as a music teacher and would recommend it to a fellow music educator.

USING MINDFULNESS TO REDUCE OCCUPATIONAL STRESS AND
BURNOUT IN MUSIC TEACHERS: A RANDOMIZED CONTROLLED TRIAL

by

Dana Arbaugh Varona

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2019

Advisory Committee:

Dr. Michael P. Hewitt, Co-Chair
Dr. Stephanie Prichard, Co-Chair
Dr. Patricia Alexander
Dr. Kenneth Elpus
Dr. Yo-Jung Han
Dr. Jennifer Turner

© Copyright by
Dana Arbaugh Varona
2019

Dedication

This dissertation is dedicated to Ken and Debbie Arbaugh, who together taught me everything I needed to know to enjoy a fulfilling and successful life.

‘O ka makua ke ko’o o ka hale.

The parent is the support that holds the household together.

Acknowledgements

The journey toward the completion of this dissertation has been both incredibly fulfilling and tremendously exhausting. Its completion is due to the tireless support of many incredible individuals from both within and outside the University of Maryland who simultaneously challenged and nurtured me along the way. Adam Grisè, Grace Chris, Tyra Flotte, Jessica Kendal, Glen Brumbach, Austin Gaskin, Ashland Murphy, Steph Fernsler, and Marcus Daniel: there are no words to express my sincerest thanks for your energetic collaboration and spirited fellowship. Adam, our many lively conversations about a variety of topics from inferential statistics to equity forever changed me. I couldn't have asked for a better academic partner-in-crime! Grace, there are no words -- my heart is full thanks to our countless talks, walks, and coffee dates. I can only aspire to be as brilliant and selfless a person as you. Of course, not all of my collaborating was with graduate students. Mahalo to the many phenomenal undergraduates with whom I have had the absolute pleasure of working. I hope that you learned half as much from me as I have learned from you. Special thanks to Dr. Tiger Robison for your kindness and honesty. You have no idea how much I look up to you. I would like to express my warmest mahalo to Dr. Frank Diaz of Indiana University -- Bloomington for his honest, selfless, and inspiring mentorship over the last year. Frank, you are truly the embodiment of the aloha spirit.

Although it was intimidating to write for a committee whose work I regard so highly, the support, feedback, and generous gift of time from this remarkable group of scholars and friends enabled me to produce a document of which I am

extremely proud. I would like to extend my sincerest thanks to Dr. Patricia Alexander and Dr. Jennifer Turner for being two of the most influential people I had the pleasure of encountering in my doctoral studies. Having two strong and brilliant women as role models reminded me why I chose to pursue a career in higher education at a time when I lost sight of my passion and purpose.

I am beyond grateful for the timely addition of Dr. Yo-Jung Han to our division and to my dissertation committee. Yo-Jung, your keen eye for detail is only matched by your genuine kindness and tireless commitment to my success. I am exceedingly grateful for the mentorship and time of Dr. Ken Elpus, whose expertise was invaluable as I designed this study and analyzed my data. Ken, I am so thankful for and in awe of your ability to hold me to the most rigorous scholarly standards while ensuring me that everything will be OK.

I would like to extend my deepest and sincerest gratitude and appreciation to Dr. Stephanie Prichard and Dr. Mike Hewitt for teaching me more than I could ever give you credit for here. Stephanie, your well-timed encouragement, good-natured teasing (did you know my husband is in the Navy/I'm from Hawai'i/my dog is named Tyson and is so well trained?!), and feedback that is worth its weight in gold. Most importantly, you have shown me through your example what a remarkable teacher/scholar/musician/mother looks like. Mike, you are an in-demand scholar, teacher, and mentor because you lead by example and have the remarkable ability to help those around you to feel safe. I'm truly blessed to have worked so closely with you for the past three years and will carry the lessons you taught for the rest of my life, including the most important one – to seek joy in all things.

Finally, my deepest thanks to my incredible family for your endless support before, during, and after this endeavor. Nobody has been more important to me throughout this process than you. Thank you to my incredible parents for always believing in the beauty of my dreams and for making lifelong sacrifices to ensure that Jan and I had ample opportunities to succeed. Thank you to my remarkable big sister for quieting my anxiety, causing silent laughter, and for your good-natured big sister teasing of my sleeping and dog training habits. Thank you to my other parents, Dan and Camille, for taking me in as your own and for nurturing me throughout this process. Thank you to my aunts, uncles, cousins, and grandparents for your tireless support when I grew weary. To my remarkable husband, Chris, and our one-of-a-kind fur-baby, Tyson: you two are my entire world and being part of our family is my greatest accomplishment. Chris, thank you for being my biggest fan and for teaching me the importance of stress reduction and work-life balance. I'm absolutely certain that occupational stress reduction would not have been of interest to me had we not gone on that fateful breakfast date in my first year of teaching. You are, without a doubt, the smartest person I know. Tyson, thank you for keeping me company during many long and isolating writing days. You have no idea the joy you brought into our home. If the whole world adopted your spirit, we'd know world peace.

Table of Contents

<i>Dedication.....</i>	<i>iii</i>
<i>Acknowledgements.....</i>	<i>iv</i>
<i>List of Tables.....</i>	<i>xi</i>
<i>List of Figures.....</i>	<i>xiv</i>
<i>Chapter 1: Introduction.....</i>	<i>1</i>
In Their Own Words	1
Statement of the Problem	2
Mindfulness	4
Theoretical Frameworks	7
The Transactional Model of Stress and Coping.....	7
Emotion Regulation.....	10
Compassion	13
Need for the Study	16
Purpose of the Study	18
Definition of Terminology	19
<i>Chapter 2: Review of Literature.....</i>	<i>22</i>
Teacher Occupational Stress and Burnout	24
Teacher Occupational Stress.....	24
Measurement of Teacher Occupational Stress.....	25
Teacher Burnout	27
Measurement of Teacher Burnout	28
Section Summary.....	30
Music Teacher Occupational Stress and Burnout.....	31
Music Teacher Occupational Stress.....	31
Music Teacher Burnout	34
Strategies for Music Teachers to Overcome Occupational Stress and Burnout.....	37
Section Summary.....	39
Mindfulness	43
Defining Mindfulness	44
The Dark Side of Mindfulness.....	46
Mindfulness-Based Interventions	47
Mindfulness-Based Interventions for Teachers	48
MBIs for Music Teachers	51
Abbreviated and Asynchronous MBIs.....	52
The Effects of MBIs on Teacher Occupational Stress and Burnout	54
Section Summary.....	60
Mindfulness and Music	62

Mindfulness and Music Performance Anxiety	62
Mindfulness and Music Listening	63
Mindfulness and Musical Creativity.....	64
Practitioner Articles on Mindfulness and Music	64
Section Summary.....	65
Chapter Summary.....	65
<i>Chapter 3: Method</i>	<i>69</i>
Research Design	71
Sample.....	72
Recruitment and Enrollment.....	72
Random Assignment	73
Independent Variable.....	74
Religious Roots	78
Researcher Role.....	79
Intervention Procedures.....	80
Dependent Variables	83
Instrument.....	83
Pilot Testing	87
Descriptive Variables and Potential Covariates.....	88
Validity and Reliability	90
Internal Validity.....	91
Threats to Internal Validity.....	92
Construct Validity	93
External Validity	94
Assessment of Reliability	96
Data Analysis.....	96
Group Equivalency	97
Descriptive Analyses	99
Relations Between Demographic and Descriptive Variables and Outcome Variables Assessing	
Treatment Effectiveness	99
Effect Sizes.....	100
Covariates.....	102
Compliance.....	102
Assessing Relations Between Demographic and Descriptive Variables and Baseline Measures of	
Occupational Stress and Burnout.....	103
Examining Participant Experiences and Determining Program Feasibility	104
A Comparison of Selected Related Studies	105
<i>Chapter 4: Results</i>	<i>106</i>
Initial Sample	108
In the following section I provided descriptive statistics for all demographic and descriptive	
variables measured within the initial sample.	108
Demographic and Descriptive Data.....	108
Group Equivalency Following Randomization	110
Attrition.....	113
Group Equivalency Following Attrition.....	114

Intervention Compliance	116
Final Sample.....	118
Demographic Data.....	118
Treatment Effectiveness	120
Research Question 1: Treatment Effectiveness on Occupational Stress	121
Research Question 2: Treatment Effectiveness on Burnout	126
Research Question 3: Relations Between Demographic and Descriptive Variables and Outcome Variables.....	131
Data Transformation.....	133
Research Question 4: Participants' Self-Described Experiences	134
Motivations for Participation.....	134
Occupational Stressors During the MTME	140
Responses to Occupational Stress During the MTME.....	144
MTME as a Factor in Teachers' Responses	148
Research Question 5: Feasibility	148
Feasible: Characteristics	149
Not Feasible: Characteristics	153
Summary of Findings	154
<i>Chapter 5: Discussion</i>	<i>157</i>
In Their Own Words	157
Recapitulation	157
Discussion and Implications	160
Treatment Effectiveness	160
Demographic and Descriptive Predictors of Occupational Stress and Burnout.....	166
Participants' Experiences	174
Program Feasibility	177
Limitations	183
Recommendations for Future Research	185
Methodological Recommendations	186
Topical Recommendations	189
Conclusion	191
<i>Appendices</i>	<i>194</i>
Appendix A: IRB and NafME Approval Documentation	194
IRB Approval (December 2018)	194
NafME Approval (January 2019).....	195
Appendix B: Correspondence	197
Recruitment Email.....	197
Email following Random Assignment – Treatment Group	198
Email Following Random Assignment – Waitlist-Control Group.....	199
Week 1 Email – Treatment Group.....	200
Week 2 Email – Treatment Group.....	201
Midpoint Email – Treatment Group	202
Midpoint Email – Waitlist-Control Group.....	202
Week 3 Email – Treatment Group.....	202

Week 4 Email – Treatment Group	203
Posttest Email – Treatment Group	204
Posttest Email – Waitlist-Control Group	204
Appendix C: Intervention Materials	206
Week 1: An Introduction to Mindfulness and Focused Attention Meditation	208
Week 2: An Introduction to the Body Scan	215
Week 3: An Introduction to Self-Compassion	220
Week 4: An Introduction to Compassion for Others and Open Monitoring	227
Appendix D: MMTOSB	235
Appendix E: Surveys Used to Measure Eligibility, Demographic, and Descriptive Variables	243
Appendix F: Posttest Questions about Experience and Feasibility	253
<i>Glossary</i>	<i>258</i>
<i>References</i>	<i>259</i>

List of Tables

3.01	Sequence of the MTME.....	77
3.02	Sample Week 1 Module Outline.....	82
3.03	Sample Items from Each Category of Occupational Stress.....	85
3.04	Sample Items from Each Category of Burnout.....	85
3.05	Sample Short-Answer Questions.....	86
3.06	Descriptive Variables and Potential Covariates.....	89
3.07	A Comparison of Selected Related Studies.....	105
4.01	Frequency Counts of Gender, Race, and Ethnicity.....	109
4.02	Means, Standard Deviations, and Ranges of Age, Career Length, and Extracurricular Hours	109
4.03	Frequency Counts of School Type, Grade Level Taught, Attrition Risk, Salary Satisfaction, Perceived Administrative Support, and Perceived Parental Support.....	110
4.04	Characteristics Related to Placement into Treatment Group.....	112
4.05	Study Enrollment and Causes of Attrition.....	113
4.06	Characteristics Related to Differential Attrition Between Treatment and Waitlist-Control Groups.....	115
4.07	Characteristics Related to Intervention Compliance.....	117
4.08	Demographics of the Final Sample.....	119
4.09	Means, Standard Deviations, and Ranges of Age, Career Length, and Extracurricular Hours for the Final Sample	119

4.10	Frequency Counts of School Type, Grade Level Taught, Attrition Risk, Salary Satisfaction, Perceived Administrative Support, and Perceived Parental Support for the Final Sample	120
4.11	Parameter Estimates and Standard Errors for Linear Growth Models of the Effects of Group Assignment and Time on Music Teachers' Responses to Occupational Stress.....	124
4.12	Average Marginal Effects at Pretest, Midpoint, and Posttest by Group.....	125
4.13	Parameter Estimates and Standard Errors for Linear Growth Models of the Effects of Group Assignment and Time on Music Teachers' Responses to Burnout.....	129
4.14	Average Marginal Effects at Pretest, Midpoint, and Posttest by Group.....	130
4.15	Effects of Demographic and Descriptive Variables on Music Teachers' Self-Reported Responses to Occupational Stress and Burnout at Pretest.....	132
4.16	Final Theme List, Participant Indicator Terms, and Frequency Counts for Motivations for Participation Reported by Initial Sample.....	135
4.17	Final Theme List, Participant Indicator Terms, and Frequency Counts for Occupational Stressors Experienced During the Intervention Period.....	141

4.18	Final Theme List, Participant Indicator Terms, and Frequency Counts for Responses to Stressors During the Intervention Period.....	145
4.19	Final Theme List, Participant Indicator Terms, and Frequency Counts for Characteristics that Contributed to Feasibility.....	150

List of Figures

4.01	Predictive Margins of the Effects of the MTME on Occupational Stress w/95% CIs.....	125
4.02	Predictive Margins of the Effects of the MTME on Burnout w/95% CIs.....	130

Chapter 1: Introduction

In Their Own Words

“I often find that I get to the end of the day and feel like it happened TO me. I want to be able to use mindfulness to be more tuned in to moments throughout the day in order to be a more effective and present music educator.”

--Ellie, primary school music teacher, late 20s

“My spouse has a meditation practice. I read an inspiring book last week that describes meditation. I have tried a few practices and felt a sensation of well-being. I am frequently stressed at work and at home, and just want to feel OK.”

– K.J., secondary school music teacher, late 30s

Teaching music can be tremendously rewarding and impactful. Teaching music can also be socially and emotionally demanding. Research suggests several factors associated with increased occupational stress for music educators, including young age, teaching in a secondary school, extracurricular commitments and workload, parenthood status, and less than seven years of music teaching experience (Doss, 2016; Hedden, 2005). Further, even the most organized of music educators found it difficult to complete the many tasks required of a teacher (Conway, Micheel-Mays, & Micheel Mays, 2005; Scheib, 2003). Decreases in music educators' stress levels over a seven-year period suggest that time spent in the profession is one antidote to stress, potentially because music educators might become more effective

and efficient over time (Hedden, 2005). But is it enough to encourage the young, frustrated music educator to simply stick it out? What does one say to the veteran music educator who loves their job, but still feels overwhelmed by all of their responsibilities?

Statement of the Problem

The aforementioned problem is not unique to music educators. Teaching is considered one of the six most stressful professions in terms of physical health, psychological well-being, and job satisfaction (Johnson, Cooper, Cartwright, Donald, Taylor, & Millet, 2005) and is plagued by common workplace stressors such as working with students who struggle with readiness and discipline, classroom management, time pressures, and heavy workloads (Kyriacou, 2001). Understanding teachers' occupational stress is important not just to support their effectiveness in the classroom or to combat attrition, but for their overall health and well-being. For instance, Harrison (2014) suggested that occupational stress can undermine teacher's health, while the International Labour Office (1993) found that in comparison to several other professions, teachers report some of the highest levels of occupational stress. Unfortunately, most teachers are provided with few resources to help them cope with these stressors. Further, even fewer of these resources consider that teachers likely have limited time and money to devote to coping with occupational stress. This is a serious problem, as the physical, emotional, societal, and financial consequences of teacher stress can be costly (Montgomery & Rupp, 2005).

One consequence of music teacher stress, burnout, can contribute to undesirable outcomes for teachers, students, and schools. Music education research

suggests that music teachers report moderate to high levels of emotional exhaustion (Figueras, 2014; Hamman, Daugherty, & Mills, 1987; McLain, 2005). The Prosocial Classroom Model (Jennings & Greenberg, 2009) posits that emotional exhaustion, which is one of three facets of burnout, contributes to cynicism, a harsh classroom climate, and less efficacious teaching. This has the potential to lead to what Jennings and Greenberg (2009) refer to as a “burnout cascade” (p. 492), where students react to teacher cynicism with maladaptive behavior, which ultimately creates further classroom management problems for the teacher. In addition to teacher stress and burnout influencing classroom climate, student learning outcomes, and teacher well-being, these conditions can result in teachers ultimately leaving the workforce.

Attrition is one of the most expensive and unfortunate outcomes of teacher stress. While attrition often results from factors unrelated to occupational stress such as child-rearing, retirement, and shifting career interests (Gardner, 2006, 2010; Madsen & Hancock, 2002), music education research suggests that many of the factors that contribute to music teacher stress, including workload, school-wide changes, a lack of administrative support, and being an early-career teacher also contributed to music teacher attrition (Doss, 2016; Hedden, 2005; Shaw, 2016). Despite possessing the ability to wreak havoc on music teachers’ personal and professional lives, occupational stress and burnout do not have to be permanent or debilitating.

Mindfulness

“Between stimulus and response, there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom.”

– Viktor Frankl, M.D. (Holocaust survivor)

Researchers have been studying the efficacy of mindfulness training since 1979, when Dr. Jon Kabat-Zinn of the University of Massachusetts Medical School introduced the intervention to help individuals with chronic illnesses or terminal diagnoses cope with their symptoms (Center for Mindfulness, 2018). While the Center for Mindfulness at the University of Massachusetts Medical School continues to offer training to help individuals integrate formal and informal mindfulness practice into everyday life, mindfulness training has spread far and wide and is now a billion-dollar industry (Kim, 2018). As of 2018, mindfulness-based interventions (MBIs) have been studied in a diverse array of fields, including psychology, healthcare, neuroscience, business, the military, music, athletics, and education. As a result, there is mounting evidence to suggest that mindfulness can increase:

- acceptance and positive change following a serious & life-threatening diagnosis (van den Hurk, Schellekens, Molema, Speckens, & van der Drift, 2015),
- cardiovascular health (Loucks, Britton, Howe, Eaton, & Buka, 2015),

- patience, tolerance, and self-acceptance (Solhaug, Eriksen, de Vibe, Haavind, Friborg, Sørli, & Rosenvinge, 2016),
- emotion regulation (MacDonald & Baxter, 2016; Remmers, Topolinski, & Koole, 2016),
- academic success, including for children from lower socioeconomic backgrounds (Costello & Lawler, 2014) and homeless middle school students (Viafora, Mathiesen, & Unsworth, 2015),
- resilience (Coholic, 2011; Coholic, Eys, & Loughheed, 2012),
- self-control (Canby, Cameron, Calhoun, & Buchanan, 2015),
- self-compassion (Falsafi, 2016), and
- and job performance, even when controlling for levels of engagement (Dane & Brummel, 2014).

Additionally, mindfulness has been demonstrated to reduce

- chronic pain (Cherkin, Sherman, Balderson, Cook, Anderson, Hawkes, Hansen, & Turner, 2016),
- blood pressure (Tomfohr, Pung, Mills, & Edwards, 2015),
- reactivity (Solhaug et al., 2016),
- anxiety (Bennett & Dorjee, 2016),
- depression (Teasdale, Segal, Williams, Ridgeway, Soulsby, & Lau, 2000),
- post-traumatic stress symptoms (Felleman, Stewart, Simpson, & Heppner, 2016),
- suicidal ideation (Forkmann, Brakemeier, Teismann, Schramm, & Michalak, 2016),

- problems with alcohol (Bodenlos, Noonan, & Wells, 2013),
- the effects of bullying (Zhou, Liu, Niu, Sun, & Fan, 2017),
- occupational stress (Shonin, Van Gordon, Dunn, Singh, & Griffiths, 2014),
and
- and burnout. (Taylor & Millear, 2016).

So, what *is* mindfulness? Unfortunately, there is no single, agreed-upon definition of mindfulness. While there is a lack of consensus in the empirical literature, perhaps one of the most widely cited and broadest definitions comes from Jon Kabat-Zinn (2003), who defined mindfulness as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (p. 144). Although there are many ways to conceptualize mindfulness, this study is grounded in the belief that mindfulness is a fundamental capacity that can be developed through specific training such as mindfulness meditation. An examination of one type of mindfulness practice, focused attention meditation, is warranted to operationalize mindfulness. Focused attention meditation typically involves focusing one’s attention on a specific “anchor,” such as one’s breath. After some time, one’s focus will drift away from the specified anchor and rest upon thoughts, emotions, or memories of some sort. When practicing focused attention meditation, the individual will seek to eventually notice and acknowledge this drift and gently and nonjudgmentally refocus their attention back on the anchor. In focused attention meditation, the goal is not to prevent one’s attention from drifting or to reject thoughts, emotions, or memories, but to gently and nonjudgmentally bring one’s attention back to the anchor each time they become

aware that their mind has wandered. Over time, this increased capacity to release the object of one's attention can help cultivate a clearer awareness of moment-to-moment experience, awareness, nonjudgmentalness, clarity and stability of attention, and reduced reactivity to physiological stress responses (Meiklejohn, J., Phillips, C., Freedman, M. L., Griffin, M. L., Biegel, G., Roach, A., ... & Isberg, R., 2012).

So, what is mindfulness *not*? The goal of mindfulness is not to quickly fix an unpleasant situation, but to see things clearly and nonjudgmentally before responding to a challenge (Mindfulness & Psychotherapy, 2013). Mindfulness is about being fully aware of what is taking place so that one can act from a place of understanding and compassion instead of from reactivity and frustration. For the purpose of this study and in all other mindfulness K-12 teacher research, mindfulness is being treated as an intervention for stress reduction. While MBIs have been shown to lead to the many positive outcomes listed above, these outcomes are not guaranteed.

Theoretical Frameworks

While the specific ways that mindfulness-based interventions (MBIs) might reduce occupational stress and burnout are not yet fully understood, the following bodies of research are frequently cited as theoretical frameworks in studies examining the effects of mindfulness training on teachers' responses to occupational stress and burnout.

The Transactional Model of Stress and Coping

One model, the transactional model of stress and coping (Folkman & Lazarus, 1990; Lazarus, 1966), is one of the most influential and prevalent explanatory

frameworks of occupational stress. Here, coping is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). Lazarus and Folkman (1984) posited that coping is comprised of an initial appraisal and a secondary appraisal, which inform an individual’s efforts to regulate their emotions.

Primary appraisal process. For instance, a teacher perceiving a classroom management issue as threatening is the primary appraisal process. Following the primary appraisal process, the teacher’s use of their subsequent coping strategies that mediate the relationship between the environmental stressors and future responses is the secondary appraisal process. When a teacher appraises a situation as stressful, the emotional and cognitive resources required to help them cope are no longer available for their use in the classroom (Boekaerts, 1993). This has the potential to be problematic because a teacher that has reduced emotional and cognitive resources might possess a reduced capacity to teach their students. Over time, this reduced capacity to invest in classroom relationships could lead to decreased efficacy and burnout. Therefore, it is reasonable to consider that teachers need professional development programs to help bolster their self-regulatory resources for coping.

Secondary appraisal process. Coping strategies, or the secondary appraisal process, can be either emotion-focused or problem-focused. Problem-focused coping strategies are utilized when the individual believes that they can successfully alter the stressful situation in some way. One example of the problem-focused coping is a teacher deciding that they can alter a student’s problematic behavior by speaking with

them after class. In this case, the teacher feels that they have the resources to directly solve the problem. On the other hand, emotion-focused coping occurs when the individual believes that they are unable to alter the stressful situation. Emotion-focused coping includes mindfulness-based strategies such as mindful awareness and non-reactivity because they can lessen the negative impact of the unalterable stressor on the individual's well-being.

Coping with teacher stress. Considering that many teachers face stressors that are largely unalterable (e.g., a difficult administrator, scheduling conflicts, limited funds and resources), problem-focused coping is not always the most productive course of action. When dealing with stressful situations that are unlikely to be altered, teachers might consider utilizing emotion-focused coping, including mindfulness-based strategies, as these strategies might assist music educators in coping with the unalterable stressors frequently experienced across the profession. Research suggests that through cultivating focused attention, awareness, and an open orientation (e.g., non-reactivity), the strategies taught in mindfulness-based interventions can help reduce reactivity to stress and generate a calmer emotional state and mental clarity (Benn, Akiva, Arel, & Roeser, 2012; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Roeser, Schonert-Reichl, Jha, Cullen, Wallance, Wilensky, ... & Harison, 2013). Additionally, teachers exhibiting more mindfulness might be more likely to utilize emotion-focused coping strategies, which might decrease repressive coping behaviors (Bishop, Lau, Shapiro, Carlson, Anderson, Carmody, ... & Devins, 2004; Weinstein, Brown, & Ryan, 2009). If teachers are able to sustain attention on the present moment while keeping an open

orientation marked by curiosity and acceptance, then they might also experience a reduction in occupational stress and burnout.

Emotion Regulation

Another important construct related to teachers' capacity to cope with occupational stress is emotion regulation (Montgomery & Rupp, 2005). Gross (1998) defined emotion regulation as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (p. 275). Emotion regulation can be automatic, controlled, conscious, or unconscious, and may influence multiple points throughout the emotion generation process (Gross, 1998). Emotion regulation, which is closely related to coping, differs slightly in that it extends to the regulation of all emotions, while coping typically refers to reducing the experience of negative emotions (Gross, 1998). To better understand emotion regulation, one must understand the stages of emotion generation. There are four stages present in the generation of an emotion:

1. Situation: A situation begins that has emotional consequences.
2. Attention: The individual directs their attention toward the situation.
3. Appraisal: The individual evaluates and cognitively appraises the situation.
4. Response: The individual generates an emotional response, which can lead to experiential, behavioral, and physiological responses.

Five families of emotion regulation. The fourth stage, an emotional response, can influence a situation (the first stage). As a result, this model contains a feedback loop from stage 4 (response) to stage 1 (situation), implying that emotion generation is ongoing and dynamic (Gross & Thompson, 2007). Gross' (1998) theory

of emotion regulation is built upon the assumption that each of the four stages of emotion generation can be regulated by an individual. Gross (1998) proposes five families of emotion regulation that relate to each of the four stages in the emotion generation process:

1. Situation selection: the individual decides to approach or avoid a situation.

For instance, if a music teacher chooses to avoid seeing a difficult parent at a back-to-school night, they might be attempting to decrease the likelihood of experiencing the negative emotions typically associated with interacting with that parent.

2. Situation modification: the individual attempts to modify the physical aspects of a situation in an effort to change its emotional impact. For example, if a music teacher is engaged in a frustrating discussing with a disruptive student, they might adjust their posture or utilize humor to de-escalate the situation.

3. Attentional deployment: the individual diverts their attention toward or away from the situation. For example, a music teacher might choose to divert their attention away from a stressful day by practicing their instrument during their lunch break. Alternatively, a might teacher might divert their attention toward a stressful situation by constantly worrying about an impending meeting with their principal. While worry can sometimes lead to problem solving, it is typically considered maladaptive as it is correlated with generalized anxiety disorder (Borkovec & Inz, 1990).

4. Cognitive change: the individual cognitively appraises the situation differently in an attempt to influence its emotional impact. For example, a choir director might be stressed following a disastrous dress rehearsal. However, if they take a step back and see the bigger picture, they might realize that the students have made a fantastic amount of progress since the beginning of the semester and likely perform well at the concert as their track record would suggest. In general, cognitive reappraisal is correlated with improved interpersonal outcomes and well-being and is therefore considered an adaptive emotion-regulation strategy (Gross & John, 2003).
5. Response modulation: the individual attempts to impact experiential, behavioral, and physiological responses. For example, an orchestra director might go for a run following a frustrating day at work, as it can downregulate the physiological and experiential effects of negative emotions (Gross & Thompson, 2007) in addition to reducing emotional distress and improving emotional control (Oaten & Cheng, 2006).

The five families of emotion regulation strategies can be separated into two broader categories: antecedent-focused and response-focused. Antecedent-focused emotion regulation includes any strategy employed before emotions are fully aroused (e.g., situation selection, situation modification, attentional deployment, and cognitive change), while response-focused emotion regulation includes any strategy employed once emotions are already aroused (e.g., response modulation) (Gross, 1998; Gross & John, 2003). Emotion regulation is an important aspect of teacher stress and burnout

management because poor emotion regulation in teachers is correlated with frequent and enduring negative affect, increased negative interactions with students, occupational stress, burnout, and ultimately attrition (Darling-Hammond, 2001; Montgomery & Rupp, 2005).

Mindfulness training to improve efficacy to regulate emotions.

Mindfulness training has been demonstrated to provide individuals with an accurate portrait of their coping resources as well as a clear view of the stressors they face (Skinner & Beers, 2016). Mindfulness-based interventions (MBIs) that have been studied in the context of K-12 classrooms offer burgeoning evidence for their efficacy in improving emotion regulation and self-efficacy. Research has demonstrated that MBIs have the potential to improve emotion regulation through developing improved self-awareness and capacity for attention (Chiesa, Serretti, & Jakobsen, 2013), to detect, reify, accept, and modulate emotion in real time (Garland, Gaylord, & Fredrickson, 2011), improve self-perception by reducing self-referential thoughts, increasing self-compassion, and decentering (Hölzel, Lazar, Gard, Schuman-Olivier, Vago, & Ott, 2011), and reduce negative appraisals of teaching competence through increased self-compassion leading to greater self-efficacy (Neff, 2003).

Compassion

In addition to coping strategies and efficacy for regulating emotions, research on mindfulness training for teachers examines reported self-compassion and compassion for others as an indicator of the cognitive changes that might foreshadow a reduction in occupational stress and burnout. Generally speaking, compassion for both oneself and for others is considered beneficial for an individual's psychological

well-being.

Self-compassion. Self-compassion is primarily conceptualized as an attitude that is relevant to the experience of suffering and is comprised of (a) self-kindness instead of self-judgment; (b) common humanity instead of isolation; and (c) mindfulness instead of over identification (Neff, 2003). Here, self-kindness generally refers to treating oneself with warmth and understanding instead of harshness and judgment in the face of suffering; common humanity refers to viewing one's failures as part of the human condition rather than feeling isolated from the rest of humanity; and mindfulness refers to possessing a balanced awareness of life's painful experiences instead of over-identifying with painful emotions (Neff, 2003). Macbeth and Gumley (2012) found that high levels of self-compassion were correlated with reduced stress, anxiety, and depressive symptoms, while Neff (2003) and Neff, Kirkpatrick, and Rude (2007) found that high levels of self-compassion were related to improvements in self-reported happiness levels, optimism, positive affect, and general life satisfaction. For teachers, higher levels of self-compassion have been found to reduce negative appraisals of one's teaching competence, which in turn increased self-efficacy (Neff, 2003). Additionally, Hölzel et al. (2011) found that higher levels of self-compassion can help to regulate emotions in teachers by confronting perceived failures with kindness instead of judgment.

Compassion for others. Compassion for others has proved difficult to define (Goetz, Keltner, & Simon-Thomas, 2010), but is generally considered an awareness and feeling of concern for another person's suffering followed by a desire to alleviate that suffering (Goetz et al., 2010). Goetz et al. (2010) suggested that compassion for

others might have evolved as humans cared for offspring because it encouraged positive relationships between individuals outside of one's family. Compassion can be conceptualized as both a state and a trait (Goetz et al., 2010). A compassionate state is comprised of brief compassion, resulting from a clear cause, while compassion as a trait is characterized by the capacity to experience compassion across several contexts. Research that has explored the relationship between compassion for others and psychological well-being has been primarily experimental in nature. For instance, after a short training on compassion, a sample of non-clinical adults reported greater instances of positive affect compared to a control group (Klimecki, Leiberg, Lamm, & Singer, 2012), while community adults that performed a compassionate action toward another individual each day for one week reported greater increases in happiness compared to a control group (Mongrain, Chin, & Shapira, 2011).

Increasing compassion for oneself and others. Preliminary evidence exists that supports the notion that compassion for both oneself and others is not a fixed trait, but can be increased through training (Lutz, Slagter, Dunne, & Davidson, 2008; Lutz, Slagter, Rawling, Francis, Greischar, & Davidson, 2009). While only a handful of studies have examined the relationship between self-compassion and compassion for others, initial research suggests that (a) self-compassion and compassion for others utilize similar brain regions (Longe, Maratos, Gilbert, Evans, Volker, Rockliff, & Rippon, 2010); and (b) individuals who are more compassionate toward others also have the capacity to be more compassionate toward themselves (Breines & Chen, 2013). Some researchers hypothesized that mindfulness training can increase an individual's capacity to be more compassionate (a) by increasing awareness of both

themselves and others; (b) by acknowledging the universal desire for happiness; and (c) by practicing specific exercises intended to help cultivate compassion for oneself and others, including challenging individuals at work (Pace, Negi, Adame, Cole, Sivilli, Brown, ... & Raison, 2009; Rinpoche & Mullen 2005). Utilizing compassion for others to directly address one source of occupational stress would fall under the umbrella of the aforementioned problem-focused coping strategies.

Need for the Study

If music education researchers are committed to providing in-service music teachers with effective tools to cope with occupational stress and burnout, then they should dedicate themselves to researching the efficacy of feasible methods for reducing occupational stress and burnout. A review of the literature on occupational stress and burnout reduction for music educators revealed an urgent need for more research in this area. Although there are a handful of peer-reviewed practitioner articles addressing stress reduction techniques for the music educator (e.g., Hamman & Gordon, 2000; Hylton, 1989; Varona, 2018), these articles must be built upon a strong foundation of empirical research.

At the moment, empirical research examining interventions to reduce levels of occupational stress and burnout within the broader population of K-12 teachers is limited. All teachers, including music teachers, face a variety of occupational stressors, but are provided with few, if any, resources to help alleviate them. Thus, there is a need for both feasible and accessible strategies to help teachers cope with symptoms of occupational stress and burnout.

While preliminary research is currently being conducted to address this need in this area within the population of K-12 teachers, to the best of my knowledge there is only one such program specifically intended to reduce stress for music educators. This program, the Mindfulness-Based Wellness and Pedagogy workshop (Diaz, 2018) is currently only offered in residence at Indiana University, Bloomington.

Considering the amassing evidence suggesting the efficacy of MBIs as an intervention for reducing stress and burnout in both K-12 teachers and in the general population (e.g., Brown et al. 2007; Flook, Goldberg, Pinger, Bohus, & Davidson, 2013; Specia, Carlson, Goodey, & Angen, 2000; Taylor, Harrison, Haimovitz, Oberle, Thomson, Schonert-Reichl, & Roeser, 2016), it is reasonable to consider that offering mindfulness training to K-12 music teachers might equip them with strategies to better cope with occupational stress. With only one such MBI offered for the purpose of reducing the occupational stress associated with teaching music, there is a need to make the demonstrated benefits of mindfulness training accessible and feasible for practicing K-12 music educators. With initial evidence suggesting that abbreviated MBIs as brief as three sessions are efficacious in reducing stress (Harnett, Whittingham, Puhakka, Hodges, Spry, & Dob, 2010; Zeidan, Johnson, Diamond, David, & Goolkasian, 2010), and recent research demonstrating few differences in stress reduction outcomes between participants who undertook an abbreviated four-week MBI and the standard eight-week MBI (Demarzo, Montero-Marin, Puebla-Guedea, Navarro-Gil,

Herrera-Mercadal, Moreno-González,... & Garcia-Campayo, 2017), it is reasonable to hypothesize that a four-week MBI might reduce reported symptoms of occupational stress and burnout in K-12 music educators. However, it is not always feasible for music educators to travel for in-residence mindfulness training. Thus, there is a need for an abbreviated (four-week) web-based MBI adapted specifically for in-service music educators.

Purpose of the Study

The purpose of this study was to examine the effects of a mindfulness-based intervention (MBI) on K-12 music educators' self-reported responses to occupational stress and burnout. Secondary purposes were (a) to explore the experiences of K-12 music educators who underwent a four-week web-based MBI; and (b) to determine if there were any potential relations between participants' demographic and descriptive data and their pretest levels of self-reported responses to occupational stress and burnout. The four-week web-based MBI will be referred to as the Mindfulness Training for Music Educators (MTME). The following research questions were developed for this study:

1. What is the effect of the MTME on K-12 music teachers' self-reported responses to occupational stress?
2. What is the effect of the MTME on K-12 music teachers' self-reported responses to burnout?
3. What are the relations between K-12 music teachers' age, gender, race, ethnicity, time spent in the profession, grade level taught (e.g., primary or secondary), type of school (e.g., public or private), extracurricular

hours, perceived support from administrators, perceived support from parents, and satisfaction with salary and self-reported responses to occupational stress and burnout at pretest?

4. What are the experiences of K-12 music teachers who participated in the MTME?
5. What aspects of the MTME do K-12 music teachers feel are feasible to undertake for the purpose of managing their responses to occupational stress and burnout?

While much of the related literature falls under the category of efficacy studies, the present study is an effectiveness study. In efficacy studies, researchers measure the impact of an intervention under ideal conditions while in effectiveness studies, researchers measure the impact of an intervention in real-world settings (Godwin et al., 2003).

Since the present study required music teachers to undergo web-based mindfulness training while tending to their personal and professional responsibilities, it is more similar to an effectiveness study.

Definition of Terminology

The following terminology was utilized throughout this study:

1. Mindfulness: There has been some disagreement amongst scholars on how to best define mindfulness. Jon Kabat-Zinn (2003), the creator of the MBSR program and the father of research on the efficacy of MBIs defined mindfulness as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of

experience moment by moment” (p.144)

2. Mindfulness-based interventions (MBIs): The systematic teaching of mindfulness to improve a situation, especially a medical or psychological disorder
 - a. Abbreviated MBIs: MBIs requiring less time than the standard eight-week MBSR program
 - b. Web-based MBIs: MBIs offered online as opposed to face-to-face, typically for the purpose of increasing access and feasibility
3. Awareness: A continuous monitoring of experience with a focus on current experience rather than preoccupation with past or future events (Roemer & Orsillo, 2003)
4. Attention: A heightened sensitivity to a restricted range of experience (Kosslyn & Rosenberg, 2001), which implies that experience outside of attention is actively ignored or disregarded
5. Formal mindfulness practice: Specific periods of time in which an individual purposefully stops other activities and engages in particular methods of cultivating mindfulness (Kabat-Zinn, 1994)
6. Informal mindfulness practice: Activities that help to cultivate a continuity of awareness into all activities of daily living. Mindfully participating in routine activities such as eating, walking, or even interacting with students invites an individual to cultivate and sustain their attention in particular ways. Here, the purpose of informal practice is for an individual to remind themselves to be

present in the moment and accept each moment as it is. (Kabat-Zinn, 2003; Kabat-Zinn, 1994)

7. Occupational stress: “The experience by a teacher of unpleasant, negative emotions, such as anger, anxiety, tension, frustration or depression, resulting from some aspect of their work as a teacher” (Kyriacou, 2001, p. 28)
8. Burnout: A prolonged response to chronic emotional and interpersonal stressors on the job, defined by the three dimensions of exhaustion, cynicism, and inefficacy (Maslach, Schaufeli, & Leiter, 2001)
9. Effectiveness study: A study that measures the impact of the intervention in a real-world setting (Godwin et al., 2003)
10. Efficacy study: A study that measures impact of an intervention under ideal conditions (Godwin et al., 2003)

Chapter 2: Review of Literature

The purpose of this study was to examine the effects of a mindfulness-based intervention (MBI) on K-12 music educators' self-reported responses to occupational stress and burnout. Secondary purposes were (a) to explore the experiences of K-12 music educators who underwent a four-week web-based MBI; and (b) to determine if there were any potential relations between participants' demographic and descriptive data and their pretest levels of self-reported responses to occupational stress and burnout. In this review of literature, I will review several bodies of research to illustrate how the present study is rooted in existing research. For the purpose of this study, I will only include research that addressed (a) teacher occupational stress and burnout; (b) music teacher occupational stress and burnout; (c) MBIs for teachers; and (d) mindfulness and music. In order to provide a sufficient background on the broader field of mindfulness research, I will provide a brief overview on the history of mindfulness, pertinent definitions, and MBIs outside of the field of education.

I will begin my examination of research on teacher occupational stress by summarizing the status and measurement of this construct. Next, I will outline the status and measurement of teacher burnout, which is a separate condition caused by prolonged exposure to high levels of occupational stress. I will follow section with a similar examination of the status of music teacher-specific occupational stress and burnout. Following the presentation of factors associated with occupational stress and burnout in music teachers, I will include a brief discussion of factors related to attrition in this section because burnout is one common cause of attrition for music

teachers. Finally, I will review related strategies for managing occupational stress and burnout that were presented in practitioner journals.

In the next section, I will provide a brief overview of the field of mindfulness research, including its history, pertinent definitions, limitations, and a brief overview of the underpinnings of all MBIs, regardless of field. Next, I will summarize the most frequently studied MBIs for reducing teacher stress and burnout, including the one mindfulness-based intervention designed specifically for music teachers. I will conclude this section with a brief discussion on abbreviated and asynchronous MBIs and what they offer to individuals who are unable to attend full-length and face-to-face mindfulness training courses.

Perhaps the most closely related research to the present study includes experimental research conducted to determine the efficacy and feasibility of various MBIs in reducing occupational stress and burnout in teachers. I will provide an in-depth examination of all such studies that included occupational stress or burnout as a dependent variable. I will organize these intervention studies by those conducted with (a) K-12 teachers; (b) primary school teachers; and (c) secondary school teachers. Although there is no published research examining the effects of MBIs on music teacher occupational stress and burnout, mindfulness has appeared in the music education literature for other purposes. This line of research included measuring the impact of MBIs on (a) performance anxiety; (b) awareness; (c) listening comprehension and enjoyment; (d) perceived attention; (e) aesthetic response; (f) flow; and (g) perceived musical creativity. I will conclude this section with a brief

review of suggested strategies from practitioner articles for implementing mindfulness in the music classroom.

Teacher Occupational Stress and Burnout

The following section contains a brief overview of teacher occupational stress and burnout, including (a) factors that are associated with increased levels of occupational stress and burnout; (b) their symptoms; and (c) how they are measured.

Teacher Occupational Stress

Teacher occupational stress can be defined as “The experience by a teacher of unpleasant, negative emotions, such as anger, anxiety, tension, frustration or depression, resulting from some aspect of their work as a teacher” (Kyriacou, 2001, p. 28). In terms of physical well-being, psychological well-being, and job satisfaction, teaching is considered one of the most stressful occupations (Johnson et al., 2005). Researchers have identified several factors that contribute to teachers’ occupational stress levels, including working with students who struggle with readiness and discipline, classroom management, time pressures, and heavy workloads (Kyriacou, 2001). Teacher occupational stress can be dangerous because teachers who must devote their cognitive and behavioral resources to deal with these demands no longer possess the resources to help their students (Boekaerts, 1993). Over time, this reduced capacity to teach could potentially lead to decreased efficacy and burnout. While occupational stress does have the potential to wreak havoc on teachers’ lives, there is hope: one such model, the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984) posits that teachers can manage the internal and external demands

that require more resources than they have available by adjusting their cognitive and behavioral efforts. With the right strategies, teachers can learn to manage occupational stress, resulting in increased cognitive and behavioral resources to support their students.

Measurement of Teacher Occupational Stress

While there is a general consensus among researchers on the definition of teacher occupational stress, how to best measure teachers' occupational stress levels is open to debate. When measuring occupational stress levels, each researcher must decide if they need to collect biological markers of stress or self-reported measures of perceived stress to best answer their research questions. While it is possible to objectively measure stress levels by analyzing one's saliva, blood, urine, hair (e.g., Maduka et al., 2015; van Eck et al., 1996; van Holland et al., 2012), heart rate (e.g., Thayer, Ahs, Fredrikson, Sollers, & Wagner, 2012), or blood pressure (e.g., Vrijkotte, Van Doornen, & De Geus, 2000), measuring solely biological markers of stress does not account for individual differences in perceived stress. Contrastingly, self-reported measures of perceived stress (e.g., surveys) allow participants the freedom to determine their own levels of stress but are not objective measures of stress. Since stress is often conceptualized as a highly personal experience that results from each person's unique appraisals of various events in their lives (Cohen, Kamarck, & Mermelstein, 1983), most research on teachers' occupational stress utilizes self-report measures of perceived stress (Kyriacou, 2001). Researchers studying the effects of mindfulness-based interventions on teacher occupational stress have primarily used

three occupational stress questionnaires to gather self-reported occupational stress levels.

Perceived stress scale. Cohen, Kamarck, and Mermelstein's (1983) Perceived Stress Scale (PSS) measures perceived stress in the general population. This questionnaire has 14 questions that ask the degree to which respondents found certain situations in the last month to be stressful. Questions seek to measure respondents' emotional reactions to unpredictable stressors (e.g., "In the last month, how often have you been upset because of something that happened unexpectedly?"), and an overload of stressors (e.g., "In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?"). Respondents rate how often they felt a certain way on a five-point scale (0 = never and 4 = very often), with higher scores indicating increased occupational stress. Cronbach's alpha, a measure of internal consistency, was between 0.84 and 0.86 for the PSS.

Daily physical symptoms. Daily Physical Symptoms (DPS; Larsen & Kasimatis, 1997) is a checklist of physical stress symptoms intended to measure stress in the general population. This 27-item checklist asks participants to note if they experienced a specific physical symptom on that day, and if so, to rate its severity (1 = very mild and 10 = very severe). Physical symptoms listed on the checklist are commonly found to result from increased stress levels and include headaches, backaches, and gastrointestinal problems. Cronbach's alpha for the DPS was 0.77.

Teacher stress inventory. The Teacher Stress Inventory (TSI; Fimian, 1988), also known as the Teacher Concerns Inventory (TCI), is a teacher-specific 58-item

inventory that measures teachers' occupational stress levels, manifestations of occupational stress, and demographic information. The TSI yields 10 subscales including time management, work-related stressors, professional distress, discipline and motivation, professional investment, emotional manifestations, fatigue manifestations, cardiovascular manifestations, gastronomical manifestations, and behavioral manifestations. Participants are asked to read 49 teacher concerns and indicate if they have ever felt this way about their job, and how strong the feeling is when they experience it by circling the appropriate number on a 5-point Likert-type scale ranging from 1 (no strength; not noticeable) to 5 (major strengths; extremely noticeable). Questions include, "I have little time to relax/enjoy the time of day," "There is little time to prepare for my lessons/responsibilities," "I lack recognition for the extra work and/or good teaching I do," and "My caseload/class is too big." The Chronbach's Alpha was 0.96.

Teacher Burnout

Burnout, a more serious condition than occupational stress, refers to a prolonged response to chronic emotional and interpersonal stressors on the job, defined by the three dimensions of exhaustion, cynicism, and inefficacy (Maslach, Schaufeli, & Leiter, 2001). Burnout is a result of prolonged exposure to stressful situations (Maslach, 1981), meaning that one is unable to experience burnout without first experiencing a prolonged period of intense occupational stress. Although burnout is a more severe and longer-lasting symptom of prolonged stress, stress and burnout are typically measured as separate entities in educational research. Burnout has been mentioned in regard to education more than any other occupation (Farber, 2000)

because burnout can have serious physical, emotional, financial, and societal consequences (Montgomery & Rupp, 2005). As mentioned in Chapter 1, emotional exhaustion, one of the three dimensions of burnout, can contribute to a negative classroom climate, cynicism, and ineffective teaching (Jennings & Greenberg, 2009). In addition to the costly consequences of burnout mentioned here, one of the most expensive and unfortunate outcomes of teacher burnout is attrition.

Although risk for attrition is not one of the dependent variables under examination in the present study, much of the literature upon which the present study is built aims to reduce teacher attrition due to burnout. Research has suggested that several of the factors that can lead to teacher burnout also can lead to teacher attrition. These factors include a lack of administrative support, school climate, student concerns, workload, a lack of resources, and interpersonal conflicts in the work place (Borman & Dowling, 2008; Howes & Goodman-Delahunty, 2015). The most commonly cited reason for teacher attrition is low salary (Borman & Dowling, 2008; Harrell, Leavell, van Tassel, & McKee, 2004; Ondrich, Pas, & Yinger, 2008).

Measurement of Teacher Burnout

Like teacher occupational stress, teacher burnout has primarily been measured with self-report questionnaires. Unlike occupational stress, however, burnout lacks a series of agreed-upon biological markers that indicate increased burnout levels. Therefore, burnout has primarily been measured with the Maslach Burnout Inventory, a survey instrument, across all human service professions. Burnout is resultant from one's unique reaction to a prolonged exposure to various stressors and seems best measured with self-report questionnaires. Researchers studying teachers' burnout

levels prior to and following a mindfulness-based intervention have primarily used one teacher-specific burnout questionnaire (Maslach Burnout Inventory – Educators Survey; Maslach et al., 1986) to gather self-report data on perceived burnout levels.

Maslach burnout inventory – educators survey. While the original Maslach Burnout Inventory was developed to measure burnout across a variety of human service occupations, the scholarly interest in burnout in teaching professions led to the development of the Maslach Burnout Inventory – Educators Survey (MBI-ES; Maslach et al., 1986). Like the original Maslach Burnout Inventory, the MBI-ES measures teacher burnout as high levels of the three dimensions of burnout: (a) emotional exhaustion, which refers to the fatigued feeling that can develop as emotional energies are drained; (b) depersonalization, which refers to no longer feeling positively toward students; and (c) personal accomplishment, which refers to not feeling like one is able to help students learn and grow. These three dimensions of burnout are assessed on 7-point metrics (0 = never, 1 = a few times, 2 = once a month or less, 3 = a few times a month, 4 = once a week, 5 = a few times a week, and 6 = everyday). Two studies substantiated the validity and reliability of the MBI-ES. Iwanicki and Schwab (1981) reported Chronbach alpha estimates of 0.90 for emotional exhaustion, 0.76 for depersonalization, and 0.76 for personal accomplishment, while Gold (1984) reported Chronbach alpha estimates of 0.88, 0.74, and 0.72, respectively. These reliabilities are similar to those of the original Maslach Burnout Inventory (Maslach et al., 1986).

Section Summary

Teaching is considered one of the most stressful occupations in terms of physical well-being, psychological well-being, and job satisfaction (e.g., International Labour Office, 1993; Johnson et al., 2005). Unfortunately, teacher occupational stress can lead to costly physical, emotional, societal, and financial consequences such as decreased efficacy, burnout, and attrition (e.g., Montgomery & Rupp, 2005). While occupational stress can be destructive, the right strategies can help teachers to manage occupational stress, resulting in increased cognitive and behavioral resources to support their students (Lazarus & Folkman, 1984). When measuring teachers' stress levels, researchers must decide if they wish to objectively measure stress levels by analyzing biological markers of stress or by administering self-reported measures of stress, as each of these approaches contains unique strengths and weaknesses. Since stress is often conceptualized as a highly personal experience that results from each person's unique appraisals of various events in their lives (Cohen et al., 1983), most research on teachers' occupational stress utilizes self-report measures of perceived stress (Kyriacou, 2001) such as the PSS (Cohen et al., 1983), the DPS, the PSS (Larsen & Kasimatis, 1997), and the TSI (Fimian, 1988).

Burnout is a more serious condition than occupational stress and is comprised of to a prolonged response to chronic emotional and interpersonal stressors on the job, defined by the three dimensions of exhaustion, cynicism, and inefficacy (Maslach, Schaufeli, & Leiter, 2001). Despite burnout being a symptom of prolonged stress, stress and burnout are typically measured as separate entities in education research. Burnout has been mentioned in regard to education more than any other occupation

(Farber, 2000) and can have serious physical, emotional, financial, and societal consequences (Montgomery & Rupp, 2005). Like stress, burnout has primarily been measured with self-report measures. In education research, burnout is typically measured with one particular measure, the MBI-ES (Maslach et al., 1986).

Music Teacher Occupational Stress and Burnout

Generally speaking, related music education research includes studies examining occupational stress (Doss, 2016; Gordon, 2000, 2002; Hedden, 2005; Heston, Dedrick, Raschke, & Whitehead, 1996; Scheib, 2003; Shaw, 2016), burnout (Figueras, 2014; Hamman, Daugherty, & Mills, 1987; McLain, 2005), and attrition (Gardner, 2006, 2010; Hancock, 2008; Krueger, 2000; Madsen & Hancock, 2002) within the population of music teachers.

Music Teacher Occupational Stress

Heston, Dedrick, Raschke, and Whitehead (1996) asked public school band directors ($N = 120$) from a Midwestern state to rank a set of 10 factors according to how much job satisfaction they provide, and another 10 factors according to how much job stress they create. Participants reported that students were both sources of high satisfaction and stress, while parents and administrators were sources of job satisfaction. When coping with occupational stress, spouses were most frequently listed as a source of support. These results suggested that positive interpersonal relationships can influence job satisfaction in public high school band directors.

Gordon (2000) sought to identify the factors that influence music teachers' stress levels by impacting their attitudes, behaviors, and professional longevity.

Utilizing case study methodology, Gordon interviewed four music teachers over a period of six months, revealing three categories of occupational stressors: (a) behaviors and attitudes of students, peers, parents, and administrators; (b) program management difficulties; and (c) poor preparation for music teaching. These findings suggested that occupational stress is pervasive and can lead to professional challenges.

Gordon (2002) utilized mixed methods to determine (a) if classroom management was a source of stress for music educators; and (b) the occupational stressors associated with classroom management. Quantitative findings suggested that classroom management is a common occupational stressor, especially for men and for teachers in urban settings. Four case study participants suggested that common stressors included students' apathy, behaviors, and attitudes. Gordon (2002) suggested that music teacher education programs might consider including classroom management courses coupled with opportunities to apply classroom management strategies.

Scheib (2003) conducted a collective case study comprised of four music educators from one high school music department in the Midwest. Through interviews, observations, and document analysis, Scheib (2003) found that the participants reported that they felt they were more responsible for their occupational stress than anyone else, as they were responsible for determining their own occupational expectations and roles. Conflicts arose when there was a discrepancy between what the teacher wanted to accomplish professionally and what their school could accommodate.

Hedden (2005) investigated teacher stress in K-12 music teachers ($N = 62$) over the course of seven years using the Teacher Concerns Inventory (TCI; Fimian, 1988). After the seven-year interval, teachers reported significant differences in time management, occupational stressors, professional distress, and discipline and motivation. While these results suggest that increased time spent in the profession is correlated with lower levels of occupational stress, only an experimental design can suggest that time spent in the profession is an antidote to occupational stress.

Shaw (2016) conducted a multiple case study with four instrumental music teachers in Michigan on their experiences with occupational stress following accountability reforms. Participants reported stressors directly related to the era of accountability, including changes in teacher evaluation, obtaining tenure, and the importance of test scores. Participants also noted stressors indirectly related to accountability reforms, including increased workloads, uncertainty surrounding schedules and teaching assignments, and expectations surrounding festival performances. In addition to accountability-related stressors, participants also reported common teacher stressors, including a lack of administrator support and mounting administrative duties beyond teaching.

In an attempt to track music educators' stress over a three-month period, Doss (2016) administered the Perceived Stress Scale (Cohen & Williamson, 1988) to current K-12 public school music educators ($N = 770$) across the country. Utilizing a mixed methods design, Doss determined that while perceived occupational stress generally decreased over a three-month period, certain factors were cited as reasons for increased or decreased occupational stress. Participants cited rehearsals and

performances, workload, and school-wide changes as factors that increased stress, but did not mention low salary or administrative duties, which have been shown to be related to increased stress. Factors such as spending time with family, healthy habits like exercise, and relaxation and mindfulness were frequently mentioned as activities that helped to reduce stress.

Music Teacher Burnout

Hamman, Daugherty, and Mills (1987) identified factors related to music teacher burnout using the Maslach Burnout Inventory and the Demographic Data Sheet Questionnaire. Results indicated that workload, perceived lack of time to complete work, shifting career interests, unclear administrative leadership, a lack of recognition, and poor interpersonal relationships with other teachers were all associated with increased burnout in music educators.

McLain (2005) distributed the Maslach Burnout Inventory – Educators Survey to determine burnout levels in a non-random sample of K-12 music educators ($N = 514$) from 42 states. Results suggested that participants were moderately burned out in terms of emotional exhaustion but felt a strong sense of personal accomplishment and did not experience excessive depersonalization. While these findings aligned with Hamann, Daugherty, and Mills' (1987) profile of music teachers, they did not align with national norms for K-12 teachers, which suggested that on average, teachers are at least moderately burned out in terms of personal accomplishment and depersonalization (Maslach et al., 1996). Additionally, only 11.00% of participants indicated that they might not finish their careers as a music teacher compared to 32.00% of new teachers nation-wide (NCES, 2002).

Figueras (2014) administered the Maslach Burnout Inventory – Educators Survey (MBI-ES) to high school music, English, math, science, and social studies teachers to determine who reported the highest levels of burnout. While findings indicated that burnout levels were similar amongst all teachers, music teachers reported higher levels of emotional exhaustion than math or social studies teachers.

Music teacher attrition. Investigating factors influencing job satisfaction and attrition for public school music teachers, Krueger (2000) interviewed music teachers ($N = 30$) in their first 10 years of teaching public school music in Washington state. Both participants who were satisfied with their jobs and those who chose to leave reported that positive administrative support, sufficient professional resources, and a strong support network were necessary to do their job. These factors were lacking in the professional lives of participants who ultimately left their jobs.

Madsen and Hancock (2002) sent surveys to a sample of 225 teachers who had finished their BME in the past 10 years at the same university. Of the respondents, ($N = 137$), 17.50% of the sample were currently not teaching. Six years later, 34.40% of the same sample was no longer teaching, which is well below the national average of 50.00% reported for all K-12 teachers. Participants cited reasons for leaving the profession including public apathy for music education, concerns about the amount of time required to teach, the desire to stay home and raise a family, a preference for performing, and shifting career interests. These findings indicated that while there might be a need to increase advocacy efforts for music education, there are several factors related to attrition that by and large will not be influenced by a music teacher education program.

Gardner (2006, 2010) analyzed data from the Schools and Staffing Survey and the Teacher Follow-Up Survey to examine music teacher attrition. Compared to non-music teachers, music educators were more likely to hold part-time positions, teach students in secondary grades, teach in urban settings, teach in schools with higher percentages of non-white students, and to teach students with IEPs. Music teachers reported leaving the profession due to dissatisfaction with workplace conditions, dissatisfaction with salary, retirement, or child rearing. Music teachers who moved to jobs outside of teaching reported higher satisfaction with their new position. Music teacher job satisfaction was significant related to perceived administrative support and recognition, age, years of experience, educational attainment, and control over classroom instruction.

Hancock (2008) conducted a secondary analysis of the 1999-2000 Schools and Staffing Survey to determine factors influencing music teachers' ($N = 1,931$) risk for attrition. Results suggested that significant predictors of attrition risk included being under 40, teaching in a secondary school, teaching in a private school, increased extracurricular hours, possessing concerns about one's school, perceiving limited support from administrators and parents, reporting lower salary, and feeling dissatisfied with one's salary.

Russell (2012) distributed a survey to secondary music educators ($N = 321$) in the southwest region of the National Association for Music Education to determine the factors associated with remaining in the profession, changing jobs, or leaving the profession. Results indicated that in one year, most secondary music teachers planned to stay in their position (72.20%), while 15.50% planned to move to a different

position or leave the profession (12.30%). Participant reported different figures when it came to their five-year plan. Less than half of the surveyed teachers indicated plans to stay in their position in five years (45.70%), while 27.20% planned on changing positions or leaving the profession (27.20%). While these data indicate potential increased migration and attrition over time, they align with the percentages reported by all K-12 teachers in the National Center for Education Statistics (NCES) Teacher Follow-Up Survey (Marvel, Lyter, Peltola, Strizek, & Morton, 2006).

Strategies for Music Teachers to Overcome Occupational Stress and Burnout

Over the last 30 years, there have only been a few practitioner articles on topics related to stress and burnout in just one practitioner journal, *Music Educators Journal*. These articles generally provided strategies for the in-service music teacher to manage symptoms of occupational stress and burnout. In the earliest such article, Hylton (1989) provided several personal and professional strategies to help music teachers cope with burnout. Strategies included (a) reviewing objectives; (b) planning ahead; (c) setting priorities; (d) exercising and eating right; (e) resting and relaxing; and (f) continuing to read and learn. Based on extant research, Hylton (1989) suggested that teachers might experience improved well-being and work-life balance if they consistently utilize these strategies.

In a special issue of *Music Educators Journal* entitled, “Burnout: An Occupational Hazard,” Hamann and Gordon (2000) described the symptoms of burnout and provided a series of breathing and imagery exercises as well as coping resources for music educators experiencing burnout. Although this article is not based upon the authors’ original research, it is interesting that it proposes breathing

exercises as a means to reducing burnout symptoms many years before researchers began exploring the effects of mindfulness meditation on K-12 teachers' levels of perceived occupational stress and burnout.

In *Music Educators Journal*, Gordon (2001) stated that, based upon some of her own research, classroom management issues are often reported as some of the most pervasive stressors for K-12 music educators. Gordon reviewed the literature on classroom management and provided strategies for mitigating issues for the sake of music teacher stress reduction. This is an example of problem-focused coping, where the teacher attempts to solve the problem causing the stress rather than altering their reaction to the stressor through meditation or other stress management strategies.

Scheib (2004) utilized his practitioner article in *Music Educators Journal* to both present the results of original research and to provide strategies for music teachers seeking to manage stress and burnout. Although original research is not typically presented in practitioner journals like *Music Educators Journal*, Scheib (2004) interweaved the reports of eight band directors who had recently left or were thinking of leaving the profession as support for his article on teacher stress, burnout, and attrition. Upon analyzing participants' detailed responses, Scheib identified four categories: (a) difficult working conditions; (b) low salary; (c) poor public perceptions of teaching; and (d) low priority of music within the school curriculum. These teachers spoke of challenges recruiting and maintaining large numbers of students to justify their position, a lack of autonomy over their program due to their administrator's agenda, an unsustainable pace, especially with performances and competitions, and feeling the need to change positions to earn more money.

It is noteworthy that most of the empirical and practitioner articles on music teacher stress are several years and in some cases several decades old. In a very recent *Music Educators Journal* article, Varona (2018) coupled a recent review of the literature on music teacher occupational stress and burnout with mindfulness-based strategies for stress reduction and general well-being in the K-12 music classroom. While the strategies presented in this article are not based upon the author's original research, they are the first instance of mindfulness being suggested as a potential intervention for teacher stress reduction in the K-12 music classroom.

Section Summary

Music education research suggests several factors associated with increased occupational stress, burnout, and attrition in K-12 music teachers. Occupational stressors include classroom management issues (Gordon, 2002), a discrepancy between a teacher's professional goals and what their school can accommodate (Scheib, 2003), behaviors and attitudes of parents, students (Heston et al., 1996), peers, and administrators (Gordon, 2000), rehearsals and performances (Doss, 2016), poor preparation for music teaching (Gordon, 2000), school-wide and accountability reforms (Doss, 2016; Shaw, 2016), increased workloads (Doss, 2016; Shaw, 2016), and uncertainty surrounding teaching assignments (Shaw, 2016). Factors correlated with decreased occupational stress include time spent in the profession (Hedden, 2005), relaxation and mindfulness (Doss, 2016), time spent with family (Doss, 2016), and healthy habits (Doss, 2016). Many of these stressors align with the those that the broader population of K-12 teachers has identified as the main sources of occupational stress, including classroom discipline, working with unmotivated

students, time pressures and workload, evaluation, interpersonal issues with peers and administrators, role conflict and ambiguity, and poor working conditions (Benmansour, 1998; Kyriacou, 2001; Pithers & Soden, 1998; Travers & Cooper, 1996).

While the occupational stressors encountered by music educators reflect those experienced by the broader population of K-12 teachers, music educators report differing levels of burnout than other teachers. Factors associated with music teacher burnout include workload, perceived lack of time to complete work, shifting career interests, unclear administrative leadership, a lack of recognition, and poor interpersonal relationships with fellow teachers (Hamman et al., 1987). Music educators reported moderate levels of burnout in terms of emotional exhaustion, but reported a strong sense of personal accomplishment and without excessive depersonalization (McLain, 2005), which does not align with the norms for K-12 teachers, who reported moderate levels of burnout out in terms of personal accomplishment and depersonalization (Maslach et al., 1986). Additionally, these results only partially aligned with a more recent study, in which Figueras (2014) determined that high school music, English, math, science, and social studies teachers generally report similar levels of burnout. However, there is generally a sense of agreement that music teachers report higher levels of emotional exhaustion than other teachers (Figueras, 2014; McLain, 2005).

Significant predictors of attrition risk for music educators included being under 40, teaching at the secondary level, teaching in a private school, increased extracurricular hours, having concerns about one's school, perceived limited

administrative and parental support, and dissatisfaction with salary (Gardner 2006, 2010; Hancock, 2008). Music educators who ended up leaving their jobs reported similar factors that influenced their decision to leave, including a lack of administrative support (Gardner 2006, 2010; Krueger, 2000), a lack of professional resources (Krueger, 2000), a lack of a strong support network (Krueger, 2000), public apathy for music education (Madsen & Hancock, 2002), concerns about the time commitment required for teaching (Gardner 2006, 2010; Madsen & Hancock, 2002), the desire to stay home with one's family (Gardner, 2006, 2010; Madsen & Hancock, 2002), a preference for musical performance (Madsen & Hancock, 2002), and changing career interests (Gardner 2006, 2010; Madsen & Hancock, 2002). Some of these factors align with those associated with attrition in the broader population of K-12 teachers, while others do not. One meta-analysis of research on teacher attrition found several factors associated with increased attrition, including: (a) being young, white, female, married, and having a child; (b) not possessing a graduate degree, a specialized degree, or a teaching certification; (c) working in an urban or a suburban school, a private school, an elementary school, or a school that lacks administrative support; (d) working in a school with a large population of non-white students, students from low socio-economic backgrounds, and low achieving students; and (e) a low salary (Borman & Dowling, 2008). Although prolonged periods of high levels of occupational stress and burnout are sometimes the cause of attrition, most of the factors that predict attrition or attrition risk are only indirectly related to perceived occupational stress and burnout. Interestingly, many of these factors can be mitigated through policy changes and increased funding (e.g., low salaries, working in a school

where students have an immediate need for increased resources), while some of these factors will not change as a result of policy revisions or increased funding (e.g., being white or female).

A few practitioner articles containing strategies for combating music teacher occupational stress and burnout have resulted from this body of research. These *Music Educators Journal* articles, mostly from the early 2000s, provided strategies for dealing with occupational stress and burnout, including breathing exercises (Hamman & Gordon, 2000), classroom management strategies (Gordon, 2001), setting priorities (Hylton, 1989), relaxation (Hylton, 1989), health and fitness (Hylton, 1989), and mindfulness (Varona, 2018). However, most notably missing from this review of literature are empirical studies examining the efficacy or effectiveness of these strategies in reducing levels of perceived occupational stress and burnout. While it is promising that researchers have made recommendations for practitioners and policy-makers, music education researchers need to consider studying research-based strategies for coping with occupational stress to determine if these interventions deliver significant reductions in levels of perceived occupational stress and burnout.

Mindfulness

As stated in Chapter 1, the physical, emotional, societal, and financial consequences of teacher stress and burnout can be costly (Montgomery & Rupp, 2005). Teacher education programs typically do not provide explicit instruction on emotion regulation or utilizing self-compassion to manage one's reactions to occupational stressors despite these skills being crucial for thriving in a stressful occupation such as teaching (Roeser, Skinner, Beers, & Jennings, 2012). One such intervention, mindfulness training, has been demonstrated to be popular amongst teachers, relatively inexpensive, and easily administered through professional development modules. Teachers, including music teachers, face many occupational stressors that are beyond their control. Mindfulness training is one avenue to help teachers develop the skills that lead to stress reduction, resilience, and more efficacious teaching. This is done by teaching teachers to monitor internal reactions to stressors and to calm themselves before responding with kindness and compassion toward themselves and others.

Researchers have been studying the efficacy of mindfulness training since the late 1970s, when Dr. Jon Kabat-Zinn introduced a mindfulness-based intervention to help individuals with chronic illnesses or terminal diagnoses cope with their symptoms (Center for Mindfulness, 2018). While the Center for Mindfulness at the University of Massachusetts Medical School continues to offer training to help individuals integrate formal and informal mindfulness practice into everyday life,

MBIs have spread to a variety of fields, including psychology, healthcare, neuroscience, business, the military, music, athletics, and education.

The following sections contain (a) pertinent terminology related to mindfulness; (b) MBIs for teachers; (d) relevant research on the efficacy of MBIs in reducing teacher stress and burnout; and (e) pertinent research on mindfulness and music.

Defining Mindfulness

Although researchers have attempted to operationalize mindfulness (e.g., Bishop et al., 2004), there is no single agreed-upon definition. Jon Kabat-Zinn (2003) defined mindfulness as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (p. 144). While this is one of the oldest working definitions of mindfulness found in the empirical literature, Kabat-Zinn’s (1990) definition is an “umbrella term” for a broad array of practices and values that lead to living mindfully (Lutz, Jha, Dunne, & Saron, 2015, p. 635). Here, Kabat-Zinn’s (1990) definition is purposefully broad to avoid reducing mindfulness to one specific set of techniques. However, such a broad conceptualization could potentially be too vague to provide structure for empirical research. Decades of mindfulness research have generally led to a consensus that mindfulness is present centered and nonjudgmental (e.g., Bishop et al., 2004; Holzel et al., 2011, Teasdale, Segal, & Williams, 1995), but the lack of specificity in mindfulness definitions can be problematic when it comes to creating hypotheses about the effects of mindfulness or the mechanisms underlying its practices (Lutz et al., 2015).

While I am following Kabat-Zinn's (1990) broad definition of mindfulness, "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 1990, p 144), mindfulness meditation practices were defined as "a set of attention-based, regulatory, and self-inquiry training regimes cultivated for various ends, including wellbeing and psychological health" (Lutz et al., 2015, p. 632). This is an important distinction, as mindfulness is broad and can occur at nearly anytime, including during formal sit-down meditations and during simple everyday activities. However, choosing to sit down and engage in a dedicated meditation goes beyond the broad definition of mindfulness. Thus, the definition of mindfulness meditation practices was reserved for intentional and formal meditation practice (Lutz et al., 2015).

Additionally, mindfulness can be conceptualized as both a state, which is temporary, and a trait, which is innate. State mindfulness can theoretically be cultivated through formal mindfulness practices, while trait mindfulness is present in all individuals to varying degrees. To cultivate a state of mindfulness, an individual typically engages in a prescribed set of practices for a finite amount of time. While there are different types of mindfulness meditation (e.g., focused attention and open monitoring), individuals typically focus on some sort of sensation such as their thoughts or their breath while monitoring any distractions that they might notice. Trait mindfulness, on the other hand, refers to the characteristics of an individual that help to shape their daily experiences (Thompson & Waltz, 2007). A recent meta-analysis revealed strong evidence to suggest that mindfulness practice might reduce

individuals' vulnerability to psychological distress (Gu, Strauss, Bond, & Cavanaugh, 2015), however, it was unclear if these effects were resultant from state or trait mindfulness. Although there is a strong research base to suggest that mindfulness practice can reduce psychological and physical suffering, it is unclear exactly how much practice is required to achieve such effects.

The Dark Side of Mindfulness

Recent research suggests that MBIs are efficacious in reducing stress and increasing well-being. However, there is little research to suggest why MBIs lead to desirable outcomes for some individuals and not for others. It is worth noting that much of the research on the efficacy of MBIs for teacher occupational stress and burnout reduction was conducted with a self-selected sample of participants who desired stress reduction and wellness outcomes. In addition to the results of these studies not being generalizable to the greater population of teachers, there is some research to suggest that not only is mindfulness not for everyone, but that it has the potential to generate adverse outcomes for certain individuals. While this research is largely comprised of non-generalizable case studies detailing mental health issues that emerged following exposure to meditation (e.g., Yorston, 2001), these accounts shed light on the potential of mindfulness meditation to amplify mental health issues or reify upsetting memories that may have been lying dormant (Farias & Wikholm, 2019).

The “clickbait” version of mindfulness. Another major criticism of mindfulness is that it is another “scientific” fad based on preliminary results that have been overhyped by the media. While the results of many of these studies are

promising, the study of mindfulness-based interventions, especially for the purpose of reducing teachers' occupational stress and burnout, is still in its infancy. In spite of the many studies suggesting that mindfulness reduces stress, we still know very little about how mindfulness works, including how it influences the brain and to what extent it can improve one's health (Lieberman, 2017). Further, the social and news media often oversell the benefits of mindfulness with attention-grabbing but misleading headlines like, "One Trick to Beat Procrastination Forever" (Stubblebine, 2016). While the results of rigorous randomized controlled trials have suggested that mindfulness can lead to a variety of positive outcomes, over-simplified and attention-grabbing articles promising mindfulness as a quick, easy, and permanent solution to many of life's challenges are setting potential mindfulness practitioners up for disappointment by making unsupported claims.

Mindfulness-Based Interventions

Over two decades of neuroscientific, medical, and psychological research suggested that MBIs might help teachers foster coping skills, emotion regulation, and reduce levels of perceived stress and burnout (Benn, Akiya, Arel, & Roeser, 2012; Flook et al. 2013; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Roeser, et al, 2013). Mindfulness practice is comprised of "self-regulation of attention" (p. 232) and "an orientation toward experience in the present moment, characterized by curiosity, openness, and acceptance" (Bishop et al., 2004, p. 232). Here, paying attention nonjudgmentally means being aware of what happens in each moment without reactivity. Research suggests that mindfulness practice, which is rooted in attention and awareness, can influence physiological and psychological processes as

evidenced by measurable changes in the function and structure of various areas of the brain (See Meiklejohn et al., 2012). As a result, going through this process has the potential to develop skills for dealing with stressful situations (Kabat-Zinn, 1990).

While some researchers have attempted to evaluate the efficacy of MBIs in clinical and non-clinical populations, other researchers have attempted to uncover the mechanisms underlying MBIs. Although there is a general agreement that group-wise differences in outcomes such as trait mindfulness, stress, and well-being emerge following participation in an MBI, it is less clear why participants' scores improved following the MBI, or which cognitive, affective, or social processes were altered as a result of the training (see Lutz et al., 2015).

Mindfulness-Based Interventions for Teachers

Research has suggested that the following exemplary MBIs can reduce levels of perceived occupational stress and burnout and increase emotion regulation, and compassion within a sample of K-12 music educators across the United States.

Mindfulness-Based Stress Reduction. Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990) is likely the most widely utilized, researched, and cited evidence-based MBI intended for stress reduction purposes. Decades of medical research suggest that MBSR can lead to perceived improvements in chronic pain, body image, activity levels, medical symptoms, mood, affect, anxiety, depression, and self-esteem (Kabat-Zinn et al., 1985). In addition to research within clinical populations, MBSR has also been studied in non-clinical populations, including for the purpose of teacher stress reduction (see Emerson et al., 2017). To accomplish this, MBSR utilizes straight-forward

secular meditation techniques to influence an individual's relationship with occupational stress by reducing emotional reactivity and utilizing cognitive appraisal.

MBSR is typically delivered in a group setting by an instructor trained by the University of Massachusetts Medical School Center for Mindfulness. Most standard courses take place over the course of eight weeks, with one two-and-a-half-hour class per week accompanied by homework assignments and daily meditative practice. In recent years, however, some training classes are now available to individuals online, and the authorized curriculum has been made public (Center for Mindfulness, 2018). Regardless of the format or the population, MBSR seeks to cultivate mindful awareness and self-regulation of thoughts, behaviors, and emotions. Additionally, MBSR encourages individuals to develop attitudes of compassion and forgiveness toward both themselves and others.

In general, MBSR courses begin with an overview of what mindfulness is and what it is not, what can be expected, and eliciting a commitment from participants to attend all classes, practice 45 minutes to one hour per week, and engage in informal mindfulness-based practices throughout the day. Early formal mindfulness practices include meditations that encourage awareness of the breath and body scan meditations. As the course progresses, students move onto choiceless awareness/open presence meditation (referred to as open monitoring meditation in Lutz et al., 2008), where you simply sit and attend to any thoughts, emotions, or experiences that

come and go without attaching to any one thing. Finally, students move toward loving-kindness meditation, where positive feelings are extended to both oneself and others. In MBSR courses, informal mindfulness-based practices (e.g., eating mindfully), information on mindfulness, group discussions, and mindful sharing and listening play as important of a role in the course as the formal sitting meditations.

Stress Management and Relaxation Training. Stress Management and Relaxation Training (SMART; Cullen & Brito, 2014) is an MBI designed specifically for practicing teachers. SMART is based upon Kabat-Zinn's (1990) MBSR and utilizes roughly 50% of Kabat-Zinn's mindfulness meditations, with the remaining 50% of the program divided amongst mindful emotion regulation, compassion, and forgiveness practices. Similar to MBSR, SMART is comprised of eight weekly two-and-a-half-hour-long sessions and one four-hour silent retreat. The creators of SMART are affiliated with the University of British Columbia and are specifically interested in addressing the needs of educators, including support staff and mental health professionals who work with children and young adults.

Cultivating Awareness and Resilience in Education. Cultivating Awareness and Resilience in Education (CARE; Jennings, Greenberg, & Snowberg, 2011) is an MBI intended to increase teachers' social-emotional competence (SEC) and well-being through professional development. CARE is comprised of training in emotion skills, mindful awareness, and compassion to help teachers reduce emotional stress and increase their SEC for the

purposes of helping them improve relationships with students, manage challenging student behaviors, and model social and emotional learning for their students. CARE takes place over four to six weeks and is broken down into four day-long sessions. In between sessions, participants engage in phone coaching and receive one booster lesson two months following their completion of CARE. Although this is a substantial amount of time for in-service teachers to dedicate to a professional development program, the creators of CARE cite that the one-day professional development module has been criticized for not being long enough to account for the complexities present in teaching (Parsad, Lewis, Farris, & Breene, 2001).

MBIs for Music Teachers

In the following section, I described the only existing MBI known to be specifically for musicians including music teachers.

Mindfulness-Based Wellness and Pedagogy. Mindfulness-Based Wellness and Pedagogy (MBWP), taught by Dr. Frank Diaz of Indiana University, is a week-long in-residence program designed specifically for music educators that features “an approach to arts education and performance that uses mindful awareness and related practices to improve personal wellness, teaching, learning, and creative expression” (Diaz, 2018). MBWP “emphasizes four primary areas of skill development: (a) physiological regulation and embodied grounding; (b) concentration and awareness; (c) cognitive and emotional reframing; and (d) intentional action” (Diaz, 2018). Over the five-day course, participants develop in this area through the study of

media and readings, group and individual practices, and structured planning and reflection.

MBWP, going into its second year, is currently only offered in-residence. MBWP has been taught as a class five times to 75 teachers and college students. This past summer, MBWP certified three teachers and currently has eight new teachers in training. Through the newly certified teachers, the teachers in training, and Dr. Diaz, MBWP presentations and workshops have been offered at roughly 20 different institutions, reaching roughly a few thousand students. MBWP is both the only mindfulness program designed specifically for music teachers and the only one that is a formal institute. I attended this week-long mindfulness training program and consulted with Dr. Diaz multiple times via Skype before designing my intervention. I utilized several of the resources presented in MBWP, including practitioner articles, copyright-free guided audio formal meditations, and informal practices intended for use in the classroom.

Abbreviated and Asynchronous MBIs

Although not designed specifically for teachers, the following MBIs are high-quality examples of the recent trend of offering abbreviated and asynchronous mindfulness training to populations who would not easily be able to attend eight weeks of face-to-face mindfulness training.

Abbreviated MBIs. Because many MBIs (e.g., MBSR, SMART, CARE) require an extended in-person residence, several researchers have attempted to abbreviate MBIs for the purpose of making them more feasible, accessible, and

affordable for the general public (Demarzo et al., 2017). In general, MBIs typically range from four to seven sessions lasting one to two-and-a-half hours in length. Further, most programs require an in-residence component, while a few are offered through online or book-based training (e.g., Kabat-Zinn, 1990; Cullen & Brito, 2014). Combined with the expected 20-45-minute daily practice, participation in standard MBIs typically require a large time commitment. While there is a strong research base to suggest that mindfulness practice can reduce psychological and physical suffering, it is unclear exactly how much practice is needed to achieve these effects. Although typical MBSR program requires eight two-and-a-half hour sessions and an all-day retreat, MBIs as brief as three sessions have also resulted in positive outcomes (Harnett et al., 2010; Zeidan et al., 2010).

Originally, MBSR and similar MBIs were developed for high-income and educated clinical populations with chronic conditions (Amaro, Spear, Vallejo, Conron, & Black, 2014; Cullen, 2011). However, as MBIs have extended to non-clinical populations and have gained in popularity with diverse audiences, researchers have begun to consider the feasibility of abbreviated interventions. Since adapting MBIs for non-clinical populations, there have been increasing rates of withdrawal and decreasing compliance. While reasons for these trends are not yet fully understood, Lyssenko et al., (2015) suggested two reasons: (a) MBIs might not be as efficacious when applied to populations without significant mental health challenges; and (b) non-clinical populations might not comply with MBIs intended for clinical populations.

Demarzo et al. (2017) offered both an eight- and a four-week MBI for the

purpose of improving well-being in the same population of non-clinical undergraduate students. Compared to the control group, both the eight- and four-week groups reported significant improvements in both mindfulness and positive affect and the two- and six-month follow-ups. The only difference between the eight- and the four-week MBIs was that students in the eight-week group reported greater self-kindness at the six-month follow-up. Because both the standard and the abbreviated MBIs resulted in similar effect sizes in improved well-being, there is burgeoning evidence to suggest that an abbreviated MBI might make the benefits of mindfulness training more accessible to individuals with limited time and resources.

Web- and App-Based MBIs. Mindfulness training is primarily offered face-to-face, with only a small number of studies examining the influence of an MBI delivered online (Cavanagh et al., 2013; Gluck & Maercker, 2011). Similarly to abbreviated MBIs, web- and app-based MBIs might offer feasible and sustainable access to MBIs. Hoells et al. (2015) found that a brief (10-day) smartphone-mediated MBI resulted in significant increases in positive affect and reduced depressive symptoms. While limited in nature and supported only by a small evidence base (e.g., Mitchell et al. 2010; Parks et al. 2012; Schueller 2010; Schueller and Parks 2012), these results might suggest that an accessible and cost-effective MBI might improve participation and compliance in non-clinical populations.

The Effects of MBIs on Teacher Occupational Stress and Burnout

The following studies investigated the efficacy of various MBIs in reducing teacher occupational stress and burnout.

K-12 teachers. Jennings, Snowberg, Coccia, & Greenberg (2011) investigated the efficacy of Cultivating Awareness and Resilience in Education (CARE), a professional development program, in improving teachers' social-emotional competence and well-being. CARE is an intensive 30-hour professional development program comprised of activities intended to bolster teachers' emotional intelligence, mindful awareness, and compassion in hopes of reducing their stress and increasing the social and emotional competence necessary to build positive relationships with their students. Teachers ($N = 50$) were randomly assigned to either a waitlist-control or a treatment condition before completing pretest and posttest self-report measures on well-being, efficacy, burnout, and mindfulness. Results suggested that undergoing CARE resulted in statistically significant improvements in well-being, mindfulness, and efficacy, and statistically significant reductions in burnout in comparison to the waitlist-control group. The researchers suggested that CARE can be used to address issues of perceived teacher occupational stress and burnout that may be affecting performance. In the same study, Jennings et al. (2011) also evaluated the feasibility, attractiveness, and efficacy of CARE, designed for teacher stress reduction, in a high-poverty urban setting and in a suburban/semi-rural setting. Following the intervention, teachers in the urban setting ($n = 31$) reported increases in well-being compared to their control group, while teachers in the suburban setting ($n = 43$) did not. The results suggested that CARE might be more efficacious for teachers working in high-risk settings.

Interested in the experiences of parents and teachers of children with special needs, Benn, Akiva, Arel, and Roeser (2012) examined the effects of mindfulness

training on parents' and teachers' ($N=70$) stress and well-being. Following the five-week Stress Management and Resilience Training (SMART) mindfulness training program, participants in the treatment group reported significant increases in mindfulness, self-compassion, and personal growth and significant reductions in stress and anxiety when compared to the waitlist-control group.

Examining the effects of mindfulness training on teachers' levels of perceived occupational stress and burnout, Roeser et al., (2013) randomly assigned elementary and secondary school teachers ($N = 113$) to either a waitlist control or a treatment condition. For teachers in the treatment condition, mindfulness training included an eight-week after school program that utilized a variety of activities to foster mindfulness and self-compassion, including resources intended to help teachers cope with occupational stress and develop emotional resilience. Specifically, teachers engaged in guided mindfulness meditation and yoga, group discussions, small-group practice sessions to emulate stressful work situations, and guided home practices. Following the intervention, teachers in the treatment condition reported increased mindfulness and occupational self-compassion than the waitlist-control group upon controlling for baseline measures. Quantitative results suggest that public school teachers in the United States and Canada found (a) mindfulness training to be both feasible and efficacious for reducing occupational stress, and (b) that increasing mindfulness and self-compassion can help teachers to better manage the occupational stress associated with teaching.

Interested in explaining the mechanisms potentially underlying CARE, Schlusser, Jennings, Sharp, and Frank (2016) analyzed data from four focus groups

comprised of teachers who underwent CARE training. Their findings suggested that participants developed improved self-awareness and their ability to regulate their emotions.

Taylor et al. (2016) utilized a mixed methods design to explore the ways that an MBI might reduce teacher stress. Public school teachers ($N = 59$) were randomized to either a waitlist control or a treatment condition, and completed pretest, posttest, and follow-up surveys as well as a post-program interview designed to measure the ways in which they appraised and coped with occupational stress. Quantitative results suggested that for teachers in the treatment group, the MBI resulted in significant reductions in occupational stress. Specifically, teachers' increased efficacy to regulate emotion and increased efficacy to forgive challenging students partially mediated the reduction in occupational stress from pretest to four-month follow-up. Qualitative interview findings suggested that teachers in the treatment group utilized more adaptive strategies for coping with occupational stress and tended to view their more difficult students in a more positive light.

Primary school teachers. One of the earliest studies on teachers' experiences with mindfulness training, Napoli (2004) conducted a pilot study to obtain elementary school teachers' ($N = 3$) experiences following an eight-week intensive mindfulness training course and bimonthly mindfulness training with their students in their classroom. Qualitative interviews suggested that these three teachers used the skills learned in their mindfulness training to (a) support curriculum development and implementation, (b) work through conflict and anxiety, (c) improve their personal lives, and (d) bring about positive change in the classroom.

Interested in the effects of mindfulness training on primary school teachers' stress levels, Gold et al., (2010) similarly provided an eight-week MBSR course to a group of elementary school teachers and teaching assistants ($N = 11$). While most participants were suffering from emotional distress upon pretest, posttest results suggested that following the MBSR course, most participants reported reductions in stress, depression, and anxiety. One participant reported higher levels of anxiety following the course despite feeling that the course had been helpful. Due to the small sample size and the lack of a control group, the researchers noted that it was difficult to find statistically significant effects or to generalize these results to the larger population of primary school teachers. However, they noted that while their study was not intended to be qualitative, the participants provided a number of revealing statements about their experience with mindfulness training.

Flook, Goldberg, Pinger, Bnus, and Davidson (2013) used multiple methods to evaluate the influence of mindfulness training on burnout and both self-reported and observed measures of stress. Observed measures of occupational stress included a saliva cortisol sample, an observation of classroom teaching, and computerized tasks associated with attention and emotion regulation. Teachers ($N = 18$) were recruited from four public elementary schools that serve primarily low-income and racial/ethnic minority students in an American Midwestern city. Ten participants were randomized into the treatment group, while eight participants were randomized into the control group. The treatment group involved a standard MBSR curriculum that was modified to help teachers integrate mindfulness skills into the classroom by two trained MBSR instructors. Outside of the class, teachers were asked to practice

between 15 and 45 minutes per day for six days a week with guided audio meditation recordings. The eight-week-long intervention resulted in about 26 hours of group practice. While there were no significant group differences upon pretest, the treatment group demonstrated significant improvement on self-report measures, including reductions in psychological symptoms, burnout, and emotional exhaustion, and increases in mindfulness and self-compassion. On observer-rated classroom behavior and affective attentional bias, the treatment group also demonstrated improvements. The control group demonstrated a significant decrease in morning saliva cortisol and a significant increase in burnout from pretest to posttest. Although the researchers noted the small sample size, they were eager to highlight the observable improvements in both self- and other-reported measures of occupational stress following mindfulness training.

Secondary school teachers. Frank, Reibel, Broderick, Cantrell, and Metz (2015) investigated the effectiveness of mindfulness training on high school teachers' ($N = 36$) stress and well-being. Following participation in an eight-week MBSR program, teachers in the treatment group reported significant improvements in self-regulation, self-compassion, mindfulness-related skills like observation and nonjudgment, and in several dimensions of sleep quality when compared to the waitlist-control group.

Beshai, McAlpine, Weare, and Kuyken (2016) conducted a non-randomized feasibility study to evaluate the efficacy of mindfulness training in reducing teacher occupational stress and improving well-being. Teachers, ($N = 89$) were recruited from seven secondary schools across England and self-selected into either the control or

the treatment condition. All participants completed self-report measures of stress, well-being, mindfulness, and self-compassion both before and after the intervention. Results suggested that teachers in the treatment group reported a statistically significant increase in well-being and a statistically significant reduction in occupational stress. Even when controlling for baseline differences between the control and treatment groups, a large effect was still maintained on both dependent variables. While acknowledging the limitations of their non-randomized trial, the researchers proposed that mindfulness-based interventions are worthwhile approaches to reducing teacher occupational stress and increasing well-being.

Section Summary

MBIs for K-12 teachers were typically eight-week, in-person training programs conducted with self-selected teachers who were interested in receiving training for the purposes of reducing stress and increasing well-being. Results indicated that many in-service K-12 teachers reported generally positive outcomes, defined as significant reductions in occupational stress (Gold et al, 2010; Jennings et al., 2011; Jennings et al., 2013), burnout (Flook et al., 2013; Jennings et al., 2013; Roeser et al., 2013), anxiety and depression symptoms (Benn et al, 2012; Roeser et al., 2013), or significant increases in emotion regulation (Frank et al., 2015; Benn et al., 2012; Jennings et al., 2103), self-efficacy (Jennings et al., 2103; Poulin et al, 2008), mindfulness (Jennings et al., 2013; Poulin et al., 2008; Roeser et al., 2013); Flook et al., 2013; Frank et al., 2015; Jennings et al., 2011) and self-compassion (Beshai et al. 2016; Flook et al., 2013; Roeser et al, 2013). These findings were generally consistent across a variety of subpopulations, including elementary teachers

(Flook et al., 2013; Gold et al., 2010; Napoli, 2004), secondary teachers (Beshai et al., 2016; Frank et al., 2015), teachers in urban settings (Jennings et al., 2011), and teachers of students with special needs (Benn et al., 2012).

Overall, the results of these educational research studies were promising and aligned with mindfulness research from other fields, including business (Taylor & Millea, 2016), psychology (Shonin, Van Gordon, Dunn, Singh, & Griffiths, 2014), psychiatry (Falsafi, 2016), healthcare education (Solhaug et al., 2016), and medicine (van den Hurk, Schellekens, Molema, Speckens, & van der Drift, 2015). However, it is worth noting that these promising findings were not always consistent across studies. While researchers attributed a failure to detect significant effects to small sample size (Flook et al., 2013; Gold et al., 2010), lack of a control group (Gold et al., 2010), or non-randomization (Beshai et al., 2016), there is a need for much more research to determine if these preliminary findings are generalizable to all K-12 teachers across America and Canada. Future research should utilize larger sample sizes and random assignment. Additionally, while these results are promising, researchers do not yet fully understand how and why mindfulness interventions are yielding significant reductions in occupational stress. Future research should examine not just if, but how and why MBIs influence teachers' occupational stress and well-being.

Mindfulness and Music

Although mindfulness has not yet been studied as a potential intervention for reducing occupational stress and burnout in music teachers, it has been studied as an intervention for other music-related outcomes.

Mindfulness and Music Performance Anxiety

In his recent dissertation study, Baird (2016) explored the experiences of six undergraduate and graduate music majors as they learned and implemented a meditation technique. Qualitative data including interviews, a focus group, journals, and an open-ended survey indicated that participants experienced shifting attitudes about music performance, increased awareness, and an improvement in music performance anxiety symptoms.

Diaz (2018) investigated the prevalence of meditation practices amongst college-level musicians ($N = 255$) and their contributions to participants' music performance anxiety. When controlling for trait mindfulness and perfectionism, collegiate music majors who meditated at least weekly reported less music performance anxiety than music majors who did not meditate. Results suggested that 48% of participants meditated in the past six months, and that when controlling for trait mindfulness and perfectionism, participants who meditated at least once per week reported less music performance anxiety than participants who did not meditate at least once per week. Additionally, perfectionism and trait mindfulness accounted for 24% of the variance in music performance anxiety.

Mindfulness and Music Listening

In her master's thesis study, Boiteau (2004) explored the effects of mindful movement on elementary music students' listening comprehension and enjoyment. Third-grade music students ($N = 40$) experienced a baseline condition, in which they listened to musical selections, and a treatment condition, in which they participated in a mindful movement activity while listening to the musical selections. Participants listened to four pieces, with the first and third excerpts being a baseline condition (e.g., listening only), and the second and fourth excerpts being a treatment condition (e.g., listening with mindful movement). Participants rated their enjoyment of the listening, supported their rating by answering a free-response question about why they chose that rating, and took a listening comprehension test. Those in the treatment group reported lower enjoyment ratings, while listening comprehension scores increased until they sharply decreased between the third and the fourth excerpts. The researcher attributed the results to the students not liking the movement activity and to possibly being distracted by the movement activity paired with the fourth excerpt, rendering them unable to fully listen to and comprehend the music.

Diaz (2013) examined the effects of brief mindfulness meditation training on music majors' ($N = 132$) perceived attention, aesthetic response, and flow while listening to Puccini's *La Bohème*. Self-report survey and Continuous Response Digital Interface (CRDI) data suggested that while the majority of participants who experienced the brief mindfulness induction enjoyed the task, there were no statistically significant differences in attentiveness following the intervention. Additionally, verbal responses from participants indicated that they felt more aware

of the musical characteristics, more focused, and less distracted, which is consistent with findings from other studies on the long-term effects of mindfulness practice.

Mindfulness and Musical Creativity

Newton (2015) used qualitative interviews to explore the impact of a four-week mindfulness meditation course on composers' ($N = 3$) perceived musical creativity. Findings suggested that participants experienced improved perceived creativity by developing an enhanced awareness and focus which allowed them to express themselves musically with greater ease and clarity, and by cultivating a non-striving attitude toward composing music, which in turn reduced attachments and reactions to negative thoughts.

Practitioner Articles on Mindfulness and Music

In *General Music Today*, Falter (2016) provides a brief overview of the research on mindfulness within the population of K-12 students and provides several strategies for implementing mindfulness-based activities into the music classroom. Falter suggested using mindfulness to assist with lesson planning, transitions, deepening students' understanding of music, and classroom management.

As previously mentioned, Varona (2018) summarized the literature on music teacher occupational stress and burnout before providing mindfulness-based strategies for stress reduction and general well-being in the K-12 music classroom. Varona suggested mindfulness-based strategies such as taking time before reacting, providing students with one's full attention, using mindful awareness to notice classroom

dynamics, setting an intention before beginning work each day, and taking stock of the aspects of one's job that provide joy.

Section Summary

Mindfulness may be a promising intervention for reducing music performance anxiety (Baird, 2016; Diaz, 2018) and increasing composers' perceived musical creativity (Newton, 2015). At this time, neither third-grade music students (Boiteau, 2004) nor undergraduate and graduate music students (Diaz, 2013) found a brief mindfulness intervention to improve their listening comprehension and enjoyment or their attentiveness, respectively. However, much more research is needed to substantiate these findings. Additionally, there is a need for practitioner articles beyond Falter (2016) and Varona (2018) to help make music teacher-specific mindfulness-based strategies more accessible to in-service teachers.

Chapter Summary

This review of literature situated the present study within the broader body of research on the use of MBIs to reduce teacher occupational stress and burnout. Although much more research is needed to fully understand the status of music teacher occupational stress and burnout, existing research suggests that many of the stressors reported by music teachers are similar to those reported by K-12 teachers. For music teachers (e.g., Doss, 2016; Gordon, 2000; Hedden, 2005; Heston et al., 1996; Shaw, 2016) and the broader population of K-12 teachers alike, (e.g., Benmansour, 1998; Kyriacou, 2001; Pithers & Soden, 1998; Travers & Cooper, 1996) occupational stressors include classroom discipline, working with unmotivated

students, time pressures and workload, evaluation, interpersonal issues with peers and administrators, role conflict and ambiguity, and poor working conditions.

While the occupational stressors encountered by music educators generally align with those experienced by the broader population of K-12 teachers, music educators report differing levels of burnout than other teachers. Specifically, music teachers reported moderate levels of burnout in terms of emotional exhaustion but reported a strong sense of personal accomplishment and without excessive depersonalization (McLain, 2005), which deviates from reports by K-12 teachers (Maslach et al., 1986). Additionally, music teachers reported higher levels of emotional exhaustion than other teachers (Figueras, 2014; McLain, 2005).

Unlike education research, music education research does not yet include any studies that examined the efficacy or effectiveness of interventions intended to reduce occupational stress or burnout. One professional development intervention that is quickly gaining in popularity, mindfulness, has been shown to reduce occupational stress and burnout in the population of K-12 teachers (e.g., (Flook et al., 2013; Gold et al, 2010; Jennings et al., 2011; Jennings et al., 2013; Roeser et al., 2013). The Prosocial Classroom Model (Jennings & Greenberg, 2009), suggests that teacher burnout can contribute to cynicism, a harsh classroom climate, and less efficacious teaching. This has the potential to create what Jennings and Greenberg (2009) refer to as a “burnout cascade” (p. 492), where students react to teacher cynicism with maladaptive behavior, which ultimately creates further classroom management problems for the teacher. In addition to teacher stress and burnout influencing classroom climate, student learning outcomes, and teacher well-being, these

conditions can result in teachers ultimately leaving the workforce. Research on the effects of MBIs indicate that these professional development programs can interrupt this complex interplay of teacher and student reactions leading to reduced occupational stress and burnout. To interrupt this vicious cycle, teachers are taught to monitor internal reactions to stressors and to calm themselves before responding with kindness and compassion toward themselves and others.

These findings were promising and generally consistent across a variety of subpopulations, including elementary teachers (Flook et al., 2013; Gold et al., 2010; Napoli, 2004), secondary teachers (Beshai et al., 2016; Frank et al., 2015), teachers in urban settings (Jennings et al., 2011), and teachers of students with special needs (Benn et al., 2012) and aligned with mindfulness research from other fields, including business (Taylor & Millea, 2016), psychology (Shonin, Van Gordon, Dunn, Singh, & Griffiths, 2014), psychiatry (Falsafi, 2016), healthcare education (Solhaug et al., 2016), and medicine (van den Hurk, Schellekens, Molema, Speckens, & van der Drift, 2015). However, mindfulness is not without its criticisms (see Farias & Wikholm, 2019). In education research, effects were not always consistent across studies. While researchers attributed a failure to detect significant effects to small sample size (Flook et al., 2013; Gold et al., 2010), lack of a control group (Gold et al., 2010), or non-randomization (Beshai et al., 2016), there is a need for much more research to determine if these preliminary findings are generalizable to all K-12 teachers across America and Canada, with an emphasis on studies featuring larger sample sizes and random assignment. Additionally, the results of research conducted with self-selected samples of individuals desiring improved wellness are not

generalizable to all individuals. More seriously, some case studies suggest that meditation can exacerbate adverse conditions lying dormant in individuals, although this is rare (e.g., Yorston, 2001). The social and news media often oversell the benefits of mindfulness with attention-grabbing but misleading headlines like, “One Trick to Beat Procrastination Forever” (Stubblebine, 2016). Although the results of rigorous randomized controlled trials have suggested that mindfulness can lead to a variety of positive outcomes (see Gu et al., 2015), it is paramount that future research should not be used to overpromise life-altering benefits.

This study represents the commencement of a new line of research in music education. While initial research suggests that mindfulness may be a promising intervention for reducing music performance anxiety (Baird, 2016; Diaz, 2018) and increasing compositional creativity (Newton, 2015), an MBI has not yet been examined for the purpose of reducing stress and burnout in music teachers. Since music teachers report many similar occupational stressors to the broader population of K-12 teachers, it is feasible to hypothesize that an MBI might deliver similarly beneficial outcomes when offered to a sample of music teachers. While the results of this study can begin to fill some of the gaps in the literature, it will take decades of research on (a) music teacher stress and burnout; (b) the effects of MBIs on music teacher stress and burnout; (c) the effects of other interventions on music teacher stress and burnout to better understand what aggravates and abates music teacher stress and burnout.

Chapter 3: Method

The purpose of this study was to examine the effects of a mindfulness-based intervention (MBI) on K-12 music educators' self-reported responses to occupational stress and burnout. Secondary purposes were (a) to explore the experiences of K-12 music educators who underwent a four-week web-based MBI; and (b) to determine if there were any potential relations between participants' demographic and descriptive data and their pretest levels of self-reported responses to occupational stress and burnout. As mentioned in Chapter 1, the four-week web-based MBI was referred to as the Mindfulness Training for Music Educators (MTME). The following research questions were developed for this study:

1. What is the effect of the MTME on K-12 music teachers' self-reported responses to occupational stress?
2. What is the effect of the MTME on K-12 music teachers' self-reported responses to burnout?
3. What are the relations between K-12 music teachers' age, gender, race, ethnicity, time spent in the profession, grade level taught (e.g., primary or secondary), type of school (e.g., public or private), extracurricular hours, perceived support from administrators, perceived support from parents, and satisfaction with salary and self-reported responses to occupational stress and burnout at pretest?
4. What are the experiences of K-12 music teachers who participated in the MTME?

5. What aspects of the MTME do K-12 music teachers feel are feasible to undertake for the purpose of managing their responses to occupational stress and burnout?

In this chapter, I will first describe the research design. Next, I will discuss the sample, including recruitment, enrollment, and random assignment procedures. Then, I will discuss the independent variable, which included (a) intervention content; (b) intervention development; (c) intervention sequence; (d) religious roots; (e) researcher role; and (f) intervention procedures. Following the thorough discussion of the independent variable, I will describe the dependent variables, including (a) survey instrument development; (b) demographic and descriptive variables; and (c) potential covariates. In the next section, I will consider validity and reliability, including (a) internal validity; (b) threats to internal validity; (c) construct validity; (d) external validity; and (e) assessment of reliability. In the subsequent section on data analysis, I will justify my decisions regarding (a) determining group equivalency; (b) conducting descriptive analyses; (c) assessing treatment effectiveness; (d) calculating effect sizes; (e) determining and including covariates; (f) measuring compliance; (g) assessing relations between demographic and descriptive variables and baseline levels of occupational stress and burnout; and (h) examining participant experiences and determining program feasibility. All procedures, materials, and measures described in this chapter were approved by the University of Maryland's Institutional Review Board (IRB) and by the National Association for Music Education's (NAfME) Society for Research in Music Education (SRME) executive committee. Documentation of both IRB and NAfME approval can be found in Appendix A.

Research Design

The design of this study was a pretest-posttest control group design (Shadish, Cook, and Campbell, 2002). Self-selected participants were randomly assigned to the control or the treatment group. This randomization yielded two groups of participants that were on average probabilistically similar to each other, meaning that any differences in occupational stress or burnout at the end of the study were likely due to mindfulness training and not preexisting group differences (Shadish, et al., 2002). The pretest, midpoint, and posttest assessments were all identical, with the exception of the posttest containing several free-response questions for participants in the treatment group to complete. The participants ($N = 250$) were K-12 music teachers and National Association for Music Education (NAfME) members from across the United States. All participants completed an initial consent and eligibility survey which collected information regarding their teaching settings, careers, demographics, and reasons for undertaking mindfulness training, a pretest, a midpoint assessment, and a posttest. Participants in the treatment group ($n = 90$) completed the four weeks of web-based mindfulness training, referred to as Mindfulness Training for Music Educators (MTME), while participants in the waitlist-control group ($n = 160$) did not participate in any training or activities aside from completing the pretest, midpoint assessment, and posttest. Following the completion of the study, participants in the waitlist-control group were provided with full access to the MTME to complete at their own pace.

Sample

In the next section, I described the (a) enrollment process; (b) the initial sample; (c) the final sample; and (d) random assignment.

Recruitment and Enrollment

Participants in this study were recruited from the population of National Association for Music Education (NAfME) members who indicated an interest in teaching K-12 music on their NAfME registration forms. On Monday February 4, 2019, employees in the NAfME assessment office sent an email containing an invitation to enroll in the study to 36,289 active NAfME members who indicated an interest in teaching K-12 music. Following that initial mailing, NAfME determined that 10,799 (29.76%) members opened the email, 543 (1.50%) clicked through to the consent form and eligibility survey, 1,041 (2.87%) emails bounced back, and 24,449 (67.37%) members did not open the email. A second email was sent on Monday February 11, 2019 to 36,243 active NAfME members from the same population. Following the second invitation to participate, NAfME determined that 10,685 (29.48%) members opened the email, 359 (0.99%) clicked through to the consent form and eligibility survey, 1,018 (2.81%) emails bounced back, and 24,540 (67.71%) members did not open the email. All recruitment correspondence can be found in Appendix B.

By the afternoon of Monday February 11, 2019, over 500 participants had enrolled in the study. In order to ensure the maximum number of participants with complete data and a small waitlist in case of early attrition, I did not pause response collection for the eligibility survey until the morning of

Tuesday February 12, 2019. At that time, 589 participants had signed consent forms and completed the eligibility survey. For reasons of statistical power and due to the ease of administering the intervention to a large number of people in disparate locations throughout the US, I attempted to recruit 500 music teachers for this study. Since I had received more than 500 completed consent forms and eligibility surveys, I placed the latter 89 individuals on a waitlist in case any participants dropped out of the study before the four-week intervention period commenced. By the beginning of the four-week intervention period (Monday February 19, 2019), 444 participants provided complete demographic data, descriptive data, and baseline measures of self-reported responses to occupational stress and burnout. For a variety of reasons, 194 participants failed to provide complete data or withdrew from the study, resulting in a final sample of 250 participants. Specific causes of attrition are outlined in Chapter 4. The results of an observed power analysis in Optimal Design indicated that with a sample of 250, the study was sufficiently powered at 0.88.

Random Assignment

I randomized participants to either the treatment or waitlist-control group using Microsoft Excel. First, I entered the data of all participants who enrolled in the study in the order in which they enrolled. Then, I used a random number generator in Excel to assign each participant a random decimal number between 0 and 1. Next, I sorted participants into ascending order by their random number. Finally, I assigned participants with the lower half of random numbers (generally 0.00 – 0.50) to the

treatment group, and participants with the higher half of random numbers (generally 0.51 to 1.00) to the waitlist-control group.

Independent Variable

The independent variable for the present study was group assignment; specifically, the presence or absence of participation in the MTME.

Mindfulness Training. Treatment condition, or a participant's presence in the waitlist-control or the treatment group, was conceptualized as a dichotomous variable, with one indicating placement in the treatment condition, and zero indicating placement in the waitlist-control group. The investigation of the effect of the MTME upon K-12 music educators' responses to occupational stress and burnout took place within the context of the MTME. Prior to the intervention period, I compiled twelve mindfulness meditation guided audio files; eight research-based practitioner articles on mindfulness-based strategies for stress reduction, compassion practices for teachers, and teacher stress management; five brief videos on mindfulness, mindful listening, and compassion; and four mindfulness-based stress reduction strategies specifically designed for music educators, adapted from a recent practitioner article on mindfulness (Varona, 2018). In an effort to offer as many elements of an in-person mindfulness course via web-based training, an optional discussion board was made available to participants so they could share their experiences and ask questions of each other.

Intervention content. Care was taken to ensure that the content of the intervention (e.g., guided audio meditations, articles, videos, and music education-specific strategies) was presented in a sequential manner that was based upon the

sequencing found in standard mindfulness training programs (Lutz et al., 2008; Vago & Silbersweig, 2012). While the specific mindfulness meditations and resources (e.g., articles and videos) were carefully selected with the busy music educator in mind, the overall sequencing for the intervention came from Jon Kabat-Zinn's Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990) program. In MBSR, beginning mindfulness practitioners typically begin by learning focused attention meditation, which requires them to sustain attention on a single object such as their breath. Maintaining focused attention on a single object requires meta-awareness to notice any distractions (Tops, Boksem, Quirin, Ijzerman, & Koole, 2014). Once practitioners are familiar with focused attention meditation, they progress to open monitoring meditation, often through the way of the body scan meditation. Open monitoring and body scan meditations require practitioners to remain in the monitoring state, giving space to any thoughts or experiences that might arise without focusing on any particular object (Lutz et al, 2008; Vago & Silbersweig, 2012). Following their experiences with focused attention meditation, body scan meditation, and open monitoring meditation, practitioners typically experience loving-kindness meditation, which builds upon both focused attention meditation and open monitoring meditation (Vago & Silbersweig, 2012). In loving-kindness meditation, practitioners generate feelings of love and compassion for themselves before eventually extending these feelings to others, and eventually those to whom they dislike. This is done in hopes of replacing negative feelings for these individuals with positive ones.

Development of the intervention. All items featured in the intervention were publicly-available from reputable sources. For instance, guided audio meditations

were obtained from the University of California at Los Angeles Mindful Awareness Research Center, the Center for Mindfulness at the University of California at San Diego, Dr. Jon Kabat-Zinn of the Center for Mindfulness at the University of Massachusetts, and Dr. Kristin Neff of the University of Texas at Austin's College of Education. While it is possible that participants had some biases toward or against the sounds of voices present in these guided mediation audio files, the selected files feature meditations delivered by some of the world's foremost experts on mindfulness and have been widely used and distributed by mindfulness practitioners and researchers alike. With this in mind, I felt that they represented the highest quality in publicly-available guided meditation audio files. Similarly, the articles in the intervention were drawn from vetted sources including *Greater Good Magazine: Science-Based Insights for a Meaningful Life* from the University of California at Berkeley, *Mindful Magazine*, and *Edutopia*. Videos were drawn from the Greater Good Science Center at the University of California at Berkeley, and the University of Virginia's Curry School of Education. All of the practices, formal or informal, referenced in this dissertation study were secular practices.

Sequence of the intervention. Each of the four week-long training modules were developed around a specific type of meditation practice, beginning with focused attention meditation and ending with loving-kindness meditation. Guided audio meditations gradually increased in length throughout the course of the week and ranged from five minutes or less for the first meditation to 15 minutes or beyond by the third meditation. As a new type of meditation was introduced each week, care was taken to ensure that the new type of meditation built upon the previous week's

meditation. Finally, weeks two, three, and four included both the introduction of a new type of meditation in an appropriate sequence (e.g., body scan meditation in week two) and the reinforcement of the previous week's meditative practice (e.g., the reinforcement of focused attention meditation in week two). The table below illustrates the sequence of the intervention.

Table 3.01

Sequence of the Mindfulness Training for Music Educators (MTME)

Module	Selected Contents
Pre-Intervention Data Collection	Pretest
Week 1: An Introduction to Mindfulness and Focused Attention Meditation	Focused attention meditation, an introduction to mindfulness, mindfulness and emotion regulation
Week 2: An Introduction to the Body Scan	Focused attention meditation, an introduction to mindfulness, mindfulness and emotion regulation
Data Collection	Midpoint assessment
Week 3: An Introduction to Self-Compassion	Self-compassion meditation, body scan meditation, focused-attention meditation, self-compassion strategies for teachers
Week 4: An Introduction to Compassion for Others	Open-monitoring meditation, loving-kindness meditation, mindful listening, compassionate classroom management
Data Collection	Posttest

While the treatment group underwent the intervention, the waitlist-control group was not offered any mindfulness training, but was asked to take all pretest, midpoint, and posttest assessments. Materials included in the intervention, including

descriptions of and links to each of the activities present in each module can be found in Appendix C.

Religious Roots

The concern that “mindfulness is Buddhism in disguise” has garnered significant media and academic attention (e.g., Warsmith, 2013). Two prevalent concerns about the relationship between mindfulness and Buddhism are that mindfulness is not authentic outside of Buddhism and is a trap to lure unsuspecting participants into Buddhism (Boyce, 2015). Some experts feel that it is wrong to strip mindfulness practice of its Buddhist context because it ignores Buddhist principles that are essential to its effectiveness (Boyce, 2015). One argument against this claim is that mindfulness is a tenet of Buddhism, but just as Newton would not claim to have invented gravity, the Buddha would likely not claim to have invented mindfulness (Boyce, 2015). Thus, it would be wrong to deny mindfulness practice to people because they are not Buddhists. Acknowledging the complexity of this relationship, the strategies discussed both in this study and in the cited literature are based on secular approaches. The following quote from the Center for Mindfulness encapsulates this philosophy:

The Center for Mindfulness is [a] secular institution and MBSR (mindfulness-based stress reduction) was developed in a way that is accessible to all people regardless of the religious traditions or beliefs. Mindfulness practice is really just about being awake to our lives as they are and working with seeing our process and ourselves more clearly. This tends to be a good compliment [*sic*] to many religious traditions in ways that you can explore as you develop your practice (Center for Mindfulness, 2017).

Researcher Role

I first encountered mindfulness as a preservice music educator at Ithaca College. Like many of my peers, I found that juggling the numerous roles and responsibilities required of a music education student left me anxious, insecure, and sleep-deprived. Fortunately, the campus counseling center to offered series of workshops on mindfulness for music students as well as weekly drop-in mindfulness meditations. Mindfulness provided me with a way to understand my stressors, notice my emotional responses, and act in accordance with my values. I believe that my experience growing up in Hawai'i surrounded by Buddhism and meditation likely contributed to my willingness to engage in mindfulness practice as a college freshman. While many of my peers were uncomfortable with the practice or were completely unwilling to even attend one session, I immediately felt at home with this and many other contemplative practices such as yoga and prayer. In my spare time, I read books by Jon Kabat-Zinn, utilized guided audio meditations, and practiced yoga. Mindfulness was not a magic eraser for stress but was a useful strategy for coping with stressful situations. Over a decade later, mindfulness remains my preferred method of responding to stress.

As a former elementary and middle school music educator and a current mindfulness practitioner, I am familiar with the trials and tribulations of both teaching music in a K-12 setting and practicing mindfulness. As the researcher, this contextual knowledge has been essential. For example, it influenced the kinds of and duration of the activities that I included in the intervention, the items included in the measurement of music teacher occupational stress and burnout, and the selection of

the timeframe in which I delivered the intervention. Upon returning to Hawai'i to teach in my hometown, I continued to utilize mindfulness to help manage my occupational stress. Although I have been anxious and stressed my whole life, my experiences growing up and working in a laid-back beach town and my tendency to utilize contemplative practices have influenced how I think about work-life balance and manage my own occupational stress.

Given my long history with mindfulness practice and my complex role as researcher, music educator, and mindfulness practitioner, I had to frequently acknowledge and check my biases. From the outset of the study I believed that consistently practicing mindfulness meditation and mindfulness-based strategies would reduce occupational stress and burnout for music teachers as it did and continues to do for me. As a result, I needed to frequently review the language that I used to ensure that I was not unintentionally promising outcomes I could not guarantee nor asking leading questions of the participants. I believe that my complex role was an asset to this study, as not only was I aware of mindfulness and its potential benefits, but I was able to draw upon my decade of experience with it to design and deliver an intervention to an understudied population (Bogdan & Biklen, 2007).

Intervention Procedures

Prior to the start of the study, all participants were administered assessments of demographic and descriptive variables and responses to occupational stress and burnout regardless of their group assignment. Once the intervention period began, participants in the treatment group received access to the MTME, which was hosted

on a private Canvas site and was only accessible to treatment group members. The training, which was organized into four week-long modules, was available for participants in the treatment group to utilize at their own pace. However, weekly modules were only available in a prescribed order, meaning that the module associated with week one became available during the first week of the study, while the second, third, and fourth week-long modules became available during the second, third, and fourth weeks of the study, respectively. After the week two, all participants took the midpoint assessment regardless of their group assignment. Following the treatment group's completion of the MTME, all participants took the posttest, regardless of their group assignment. Once all quantitative data was collected via self-report measures, I made an identical copy of the intervention available to those in the waitlist-control group but did not collect any further data on their responses to occupational stress and burnout.

Although my role was primarily that of the researcher, I was also available via electronic means to help participants with a variety of issues. In most mindfulness training classes, the instructor is available to answer any questions about meditating that their students might have. Thus, I felt that it would diminish the ecological validity of the intervention if I remained completely unavailable. I provided a way ask me questions via Canvas as well as my email address, which many participants utilized to ask me questions.

Table 3.02

Sample Week 1 Module Outline

Activity	Description of Tasks
Article: “What is Mindfulness?”	This very brief article provides an overview of mindfulness.
Focused Attention Meditation (5’)	The purpose of this meditation is to help increase meta-awareness, which includes the ability to notice mind wandering.
Focused Attention Meditation (12’)	The purpose of this focused attention meditation is to help focus attention on the breath, body, and sound.
Focused Attention Meditation (15’)	In addition to increasing meta-awareness, the purpose of this focused attention meditation is to help increase dereification, which includes treating thoughts and memories simply as mental events instead of as reality.
Article: “Can Mindfulness Make Us Better Teachers?”	This article demonstrates how teachers can utilize mindfulness to help regulate their emotions and demonstrate compassion for themselves and others.
Video: “How Mindfulness Can Help Teachers with Stress”	Dr. Tish Jennings explains why teachers experience high levels of stress and how mindfulness can help them to notice and reduce that stress.
Music Education Strategy: “Giving Our Full Attention”	This mindfulness-based strategy is intended to help music teachers develop respectful relationships with students.

I prefaced each activity in the MBI with simple instructions, a brief description, and its purpose (e.g., increase meta-awareness so that you can notice mind wandering). Participants were provided with a suggested schedule but were

encouraged to complete the training modules at their own pace. While I sent weekly emails to remind participants to keep up with their training, there were not any repercussions for failing to complete a training module. Instead, I tracked compliance via Canvas, which allowed me to determine how much time was spent on the training site.

Dependent Variables

The dependent variables for this study were self-reported responses to occupational stress and self-reported responses to burnout. Research suggests that the strategies taught in MBIs might help reduce emotional reactivity to occupational stress (Benn, Akiva, Arel, & Roeser, 2012; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Roeser et al., 2013). As a result, it is possible that teachers, including music teachers who are able to sustain attention on the present moment while keeping an open orientation marked by curiosity and acceptance might experience a less frequent responses to occupational stress and responses to the related and more serious result of prolonged occupational stress, burnout.

Instrument

Self-reported responses to both occupational stress and burnout were measured with a researcher-created survey instrument called the Measure of Music Teacher Occupational Stress and Burnout (MMTOSB). The MMTOSB, a continuous measure of self-reported feelings and reactions related to music teacher stress and burnout was adapted from the Teacher Stress Inventory (TSI; Fimian, 1988) and the Maslach Burnout Inventory – Educators Survey (MBI-ES; Maslach et al., 1986). I

drew upon my experience as a music teacher and consulted with five teacher educators to select what I felt to be the two most relevant statements to music teacher stress and burnout from each category of both the TSI (Fimian, 1988) and the MBI-ES (Maslach et al., 1986). This resulted in the 24 statements relating to music teacher occupational stress and burnout that comprise the MMTOSB. Changes to pre-existing measures of teacher occupational stress and burnout included nesting statements in the context of the domain of music education and changing the language in the measure to elicit the frequency of feelings and reactions related to music teacher stress and burnout.

Participants were provided with the following instructions: “Below are 24 statements of job-related feelings and reactions. Please read each statement carefully and decide how often you feel or react in this way pertaining to your job as a music teacher. Please use the slider below each question to indicate how often you have this feeling or reaction” with 0 indicating “never” and 100 indicating “always.” Tables 3.03 and 3.04 includes sample items from each of the categories of occupational stress (Fimian, 1988) and burnout (Maslach et al., 1986), respectively.

Table 3.03

Sample Items from Each Category of Occupational Stress (TSI; Fimian, 1988)

Category	Sample Statement
Time management	I feel that there is not enough time to get things done.
Work-related stressors	I feel my class/ensemble is too big.
Professional distress	I feel I need more recognition for the extra work and/or good teaching I do.
Discipline and motivation	I feel frustrated because of discipline problems in my classroom.
Professional investment	I feel I need more control over decisions made about classroom/school matters.
Emotional manifestations	I respond to stress by feeling anxious.
Fatigue manifestations	I respond to stress with physical exhaustion.
Physical manifestations	I respond to stress with stomach pain of extended duration.
Behavioral manifestations	I respond to stress by using alcohol.

Table 3.04

Sample Items from Each Category of Burnout (MBI-ES; Maslach et al., 1986)

Category	Sample Statement
Emotional exhaustion	I feel fatigued when I get up in the morning and have to face another day on the job.
Depersonalization	I feel more callous toward people since I took this job.
Personal accomplishment	I feel I am unable to positively influence other people's lives through my work.

In order to better understand both the experience of participants in the MTME and their perceptions of intervention feasibility, I asked several open-ended questions about motivations for participation, occupational stress during the intervention period, responses to occupational stress during the intervention period, and feasibility of the intervention (see Table 3.05). These questions were developed in consultation with five teacher educators and were based upon the interview measures of coping utilized in Taylor et al. (2016).

Table 3.05

Sample Short-Answer Questions Regarding Participant Experience and Intervention Feasibility

Topic	Sample Item	Time
Participant experience	Why are you interested in undergoing mindfulness training?	Enrollment
Participant experience	Consider a stressful event in your job as a music teacher in the past four weeks. Please briefly describe this incident.	Posttest (treatment-group only)
Intervention feasibility	Did you find this mindfulness training to be feasible while performing the duties of your job as a music teacher? If so, what characteristics did you feel made it feasible to use while working as a music teacher? If not, what characteristics did you feel made it difficult to use while working as a music teacher?	Posttest (treatment-group only)

The MMTOSB was used to measure responses to occupational stress and burnout at pretest, midpoint, and posttest, while information regarding participants' motivations for participating in the study were collected at enrollment and information regarding experience and feasibility were collected from treatment-group participants at posttest.

Pilot Testing

The purposes of pilot testing the MMTOSB were to (a) simulate the use of the survey instrument in an online format; (b) monitor the feasibility of administering and scoring the instrument; (c) determine ease with which participants can follow instructions and complete the survey; and (d) ensure that the wording of the questions is clear (Fink, 2003). In order for pilot testing to be effective, I recruited a sample of ten K-12 current or former music teachers from a Mid-Atlantic state, as these participants were similar to those who I planned to recruit to participate in the study (Fink, 2003).

The MMTOSB was pilot tested between January 7 and January 14, 2019. Feedback from pilot participants generally indicated that the MMTOSB was easy to use and relevant to music teachers' experiences with occupational stress and burnout. Three pilot participants indicated a preference for a categorical measure of responses to occupational stress and burnout (e.g., "sometimes" or "always") instead of a slider indicating frequency of responses from 0% to 100% of the time. However, I decided to adapt existing measures of occupational stress and burnout (e.g., TSI; Fimian, 1988; MBI-ES; Maslach et al., 1986) to create a continuous survey instrument to ease data analysis following extensive discussion with a panel of teacher educators. Two participants indicated difficulty selecting 0, or "never" with the slider. Based on their feedback, I discovered that in order to select 0, one must select the slider, move it to the right, and then move it back to indicate 0. Although I was unable to directly address this issue in Qualtrics, I was able to advise participants who had the same

issue because of the feedback of pilot participants. A copy of the MMTOSB can be found in Appendix D.

Descriptive Variables and Potential Covariates

There are several other variables that could potentially covary with responses to occupational stress and burnout. Predictors of both increased occupational stress and increased attrition risk for music teachers include young age, teaching secondary school, increased extracurricular hours/workload, and less time spent in the profession (Doss, 2016; Hancock, 2008; Hedden, 2005), while school type, perceived administrative support, perceived parental support, and satisfaction with salary were significant predictors of attrition risk, but not perceived stress (Doss, 2016; Hancock, 2008). Gender, race, and ethnicity were not significant predictors of either stress or attrition risk in music educators (Doss, 2016; Hancock, 2008). Although school type, perceived administrative support, perceived parental support, and satisfaction with salary did not significantly predict perceived occupational stress (Doss, 2016), I collected data on these variables to (a) determine that the waitlist-control and treatment groups were statistically similar following random assignment; and (b) to determine if there were any potential relationships between these variables and self-reported responses to occupational stress and burnout at pretest. Survey instruments used to measure dependent variables, descriptive variables, potential covariates, and eligibility can be found in Appendix E. Table 3.06 contains a brief description of the descriptive variables and potential covariates measured the present study.

Table 3.06.

Descriptive Variables and Potential Covariates

Variable	Description and Coding
Young Age 1	Participants younger than 30 years of age = 1; other participants = 0
Young Age 2	Participants 30 to 39 years of age = 1; participants = 0
Young Age 3	Participants 40 to 49 years of age = 1; other participants = 0
Grade Level	Majority of K-12 students in secondary school (6-12) = 1; majority of K-12 students in primary school (K-5) = 0
School Type	School classified as a private school = 1; public school = 0
Extracurricular Hours	Participant's estimated hours spent before and after school and on the weekend performing school-related activities during a typical workweek.
Administrative Support	Participant's response to the statement "My school administration's behavior toward me is supportive and encouraging": strongly agree = 1; strongly disagree = 4
Parental Support	Teacher's response to the statement "I receive a great deal of support from parents for the work I do": strongly agree = 1; strongly disagree = 4
Satisfaction with Salary	Teacher's response to the statement "I am satisfied with my teaching salary": strongly agree = 1; strongly disagree = 4
Time Spent in Profession 1	Less than 7 years = 1; 7 years or more = 0

Time Spent in Profession 2	Less than 25 years = 1; 25 years or more = 0
Time Spent in Profession 3	Less than 31 years = 1; 31 years or more = 0
Attrition Risk	Participant's response to the statement "Are you likely to leave the music education profession at the end of the school year?": yes = 1; no = 0
Attrition from Burnout	Participant's response to the statement "Is your likeliness to leave the profession due to burnout?": yes = 1; no = 0
Gender	Free response; will categorize based on like-groupings
Race	Participant's response to "What is your race? Check all that apply" and/or "Please specify your race" if "Other" was selected
Hispanic	Participant's response to "Are you of Hispanic or Latino origin?": yes = 1; no = 0
Purpose	Participant's response to "Why are you interested in undergoing mindfulness training?": will categorize based on like-groupings

Validity and Reliability

Shadish, Cook, and Campbell (2002) use the term validity to refer to the approximate truth of an inference. When an inference is deemed to be valid, there is

typically evidence from both empirical findings and other sources of knowledge to suggest that this inference is true or correct (Shadish et al., 2002). However, assessing validity depends upon human judgments, which means that we can never be completely sure that the inferences drawn from a single experiment are true.

Internal Validity

In this study, internal validity refers to inferences about whether any observed covariation between mindfulness training and changes in occupational stress and burnout reflect a causal relationship (Shadish et al., 2002). To support such an inference, I needed to demonstrate:

1. That mindfulness training preceded a statistically significant change in occupational stress and burnout;
2. That mindfulness training covaried with changes in occupational stress and burnout; and
3. That no other explanations for the relationship were plausible.

In order to determine if mindfulness training preceded any effects on responses to occupational stress and burnout, I first administered a pretest measuring the aforementioned dependent, demographic, and descriptive variables in all participants. Then, I randomly assigned participants to either a waitlist-control or a treatment group. Halfway through the four-week intervention, I administered a midpoint assessment to see if there were any emerging group differences in dependent variables. At the end of the four-week intervention, I administered the posttest to assess if the treatment group reported any changes in occupational stress and burnout that were not evidenced in the control group. If there were any

statistically significant changes present in the treatment group that were not present in the control group, then I could report that mindfulness training covaried with changes in occupational stress and burnout.

Threats to Internal Validity

In the following section, I justified the ways in which I addressed threats to internal validity.

Selection threat. It is possible that at the start of the experiment, the average person receiving the mindfulness training was different in some way from the average person in the control group (Shadish et al., 2002). This would be a selection threat to internal validity because this difference might be responsible for any result following the treatment. To reduce selection threat, I randomly assigned all voluntary participants into either a treatment or a waitlist-control group. When properly implemented, differences between treatment and waitlist-control groups only occur by chance (Shadish et al., 2002). To ensure that the treatment and the waitlist-control groups were not different in some way that might influence the results of the study, I compared the two groups on demographic and descriptive variables and controlled for any significant differences.

History. A history threat refers to all events that take place between the beginning of the treatment and the posttest that could have resulted in the observed outcome of the treatment (Shadish et al., 2002). To address potential history threats, I tested the waitlist-control and treatment groups at the same time. Additionally, I selected the intervention period of mid-February to mid-March as the ideal time to conduct the experiment. At this point, winter concerts and holidays, which are

generally considered to be stress-producing events, were in the past, while many major events such as adjudication, spring concerts, and travel were a couple months in the future. However, states, school systems, and schools often differ from one another, it would be nearly impossible to find a four-week intervention period that did not contain any major events for any participant.

Maturation. A maturation threat refers to the natural changes that might occur even in the absence of treatment that could have produced the outcome attributed to the treatment (Shadish et al., 2002). I accounted for maturation by including the time as a variable in the analysis of experimental data and by comparing any change in the treatment group to a waitlist-control group that would theoretically have experienced similar maturation.

Construct Validity

Construct validity “involves making inferences from the sampling particulars of a study to the higher-order constructs they represent” (Shadish et al., 2002, p. 65). I have identified three potential threats to construct validity that could influence results.

Mono-method bias. In the present study, all quantitative data were collected through self-report measures. This could be problematic, as the method itself could have influenced the results. To help account for mono-method bias, I asked treatment group participants several free-responses questions participants following the intervention to obtain self-report data that helped to illustrate their experiences.

Compensatory rivalry and resentful demoralization. Compensatory rivalry and resentful demoralization could have occurred if I publicly announced the results of the random assignment. An example of compensatory rivalry would be the

waitlist-control group trying to demonstrate that they experienced changes in occupational stress and burnout despite not receiving mindfulness training, while an example of resentful demoralization would be the waitlist-control group reporting that they were not receiving the desirable treatment (e.g., mindfulness training) and subsequently altering their responses in retaliation. To account for both of these threats to construct validity, I utilized a waitlist-control group, where all members of the control group were informed that they were in a second wave of treatment and subsequently received access to the full mindfulness training program as soon as they completed their posttest.

External Validity

External validity refers to “inferences about the extent to which a causal relationship holds over variations in persons, settings, treatments, and outcomes” (Shadish et al., 2002, p. 83). External validity can refer to whether or not the causal relationship holds both over variations in persons and settings that were in the experiment (e.g., a first-year music educator vs a 30-year music educator), as well as persons and settings that were not included in the experiment (e.g., a music educator who did not volunteer for this study). I collected demographic variables from all participants to determine if mindfulness training influenced occupational stress and burnout across variations in persons and settings. However, the results of this study are only be generalizable to the population of music educators who volunteered for a stress and burnout reduction program like the MTME.

Ecological Validity. External validity is sometimes mistaken for ecological validity (Shadish et al., 2002). However, ecological validity is not a validity type, but

“a method that calls for research with samples of settings and participants that reflect the ecology of application (Shadish et al., 2002, p. 37). While designing the present study, I attempted to keep the intervention as ecologically valid as possible while increasing feasibility for busy music educators. As a mindfulness practitioner myself, I am aware of the types of activities and resources that typically make up a mindfulness training program. In my experience attending four years of weekly mindfulness classes at Ithaca College, the week-long intensive Mindfulness-Based Wellness and Pedagogy (MBWP) workshop with Dr. Frank Diaz at Indiana University, and reviewing the literature on MBIs intended for teacher stress reduction and wellness, I have found that mindfulness training typically involves guided formal sitting meditation, light reading on the history of mindfulness and how we believe it works, brief web-based resources such as YouTube videos of interviews with prominent mindfulness figures such as Dr. Jon Kabat-Zinn, journaling, and group discussion. While I found the group discussion and community to be beneficial, finding a mutually beneficial meeting time and location would be difficult with a group of music educators. Additionally, since the web-based nature of this intervention allowed me to easily deliver it to music educators across the country, I attempted to increase the ecological validity by including an optional group discussion board and encouraging private journaling. That said, I also reduced the ecological validity by eliminating the face-to-face components of the training in order to hopefully increase accessibility and feasibility for more music educators.

Assessment of Reliability

As previously mentioned, the MMTOSB was pilot tested and modified based on pilot group participants' suggestions to improve clarity. Following the collection of pretest data with the final version of the MMTOSB, I calculated Cronbach's alphas to determine the internal consistency of the items that were developed to measure occupational stress and burnout as well as for the overall instrument (Nardi, 2003). As a reminder, the first cluster was comprised of 18 items measuring the frequency of participants' responses to music teacher-specific occupational stress, while the second cluster was comprised of six items measuring the frequency of participants' responses to music teacher-specific burnout. Given that a Cronbach's alpha of 0.70 is considered to be an acceptable reliability coefficient (Nunnally, 1978), clusters for occupational stress ($\alpha = 0.81$), burnout ($\alpha = 0.81$), and the combined instrument ($\alpha = 0.87$) were found to have acceptable reliability coefficients.

Data Analysis

In the following section, I will justify my decisions regarding (a) determining group equivalency; (b) conducting descriptive analyses; (c) assessing treatment effectiveness; (d) calculating effect sizes; (e) determining and including covariates; (f) measuring compliance; (g) assessing relations between demographic and descriptive variables and baseline levels of occupational stress and burnout; and (h) examining participant experiences and determining program feasibility.

Group Equivalency

Equivalence of treatment and waitlist-control groups. Participants were assessed on baseline self-reported responses to occupational stress and burnout following randomization. To determine equivalence of the treatment and waitlist-control groups following randomization, I compared the two groups on demographic and baseline measures. I used logistic regression to determine group equivalence with respect to baseline mean group responses to occupational stress, baseline mean group responses to burnout, age, gender, race (White or non-White), Hispanic ethnicity, school type (public or private), grade level taught (primary or secondary), number of extra-curricular hours, years spent teaching, risk for attrition, risk for attrition due to burnout, satisfaction with salary, perceived parental support, and perceived administrative support.

Equivalence of completers and non-completers. To determine the equivalence of participants who completed the study and provided complete data and those who withdrew or who did not provide complete data, I compared the two groups on demographic and baseline measures. I used logistic regression to determine group equivalence with respect to baseline mean group responses to occupational stress, baseline mean group responses to burnout, age, gender, race (White or non-White), Hispanic ethnicity, school type (public or private), grade level taught (primary or secondary), number of extra-curricular hours, years spent teaching, risk for attrition, risk for attrition

due to burnout, satisfaction with salary, perceived parental support, and perceived administrative support.

Equivalence of compliers and non-compliers. To determine equivalence of the treatment group participants who complied and did not comply with the intervention, I compared the two groups on demographic and baseline measures. I used logistic regression to determine group equivalence with respect to baseline mean group responses to occupational stress, baseline mean group responses to burnout, age, gender, race (White or non-White), Hispanic ethnicity, school type (public or private), grade level taught (primary or secondary), number of extra-curricular hours, years spent teaching, risk for attrition, risk for attrition due to burnout, satisfaction with salary, perceived parental support, and perceived administrative support.

Equivalence of treatment and waitlist-control groups at posttest. To determine equivalence of the treatment and waitlist-control groups following attrition, I compared the two groups on demographic and baseline measures. I used logistic regression to determine group equivalence with respect to baseline mean group responses to occupational stress, baseline mean group responses to burnout, age, gender, race (White or non-White), Hispanic ethnicity, school type (public or private), grade level taught (primary or secondary), number of extra-curricular hours, years spent teaching, risk for attrition, risk for attrition due to burnout, satisfaction with salary, perceived parental support, and perceived administrative support.

Descriptive Analyses

Descriptive statistics such as means, standard deviations, ranges, percentages, and frequency counts were calculated to describe the initial and final samples in terms of demographic and descriptive variables. Additionally, percentages and frequency counts were calculated for salient themes following the transformation participant qualitative responses into quantitative data.

Relations Between Demographic and Descriptive Variables and Outcome Variables Assessing Treatment Effectiveness

Research questions (1) and (2) seek to determine whether or not randomization to the treatment or the waitlist-control group was associated with reductions in self-reported responses to occupational stress and burnout, respectively. To assess the effectiveness of the MTME while accounting for repeated measures over time, I analyzed the experimental data using mixed effects maximum likelihood regression. This allowed me to model the change in mean group responses to occupational stress and burnout over time while accounting for time-invariant individual characteristics (e.g., the error term per person). When utilized in educational research, this is often referred to as a linear growth model. One- and two-level models were used to investigate the change in participants' responses to occupational stress and burnout. Level one models estimate the association between the outcome variable (e.g., responses to occupational stress or burnout) and the passage of time (e.g., the four-week intervention period). Level two models utilize predictor variables to explain time-invariant individual differences. Multilevel growth

models produce parameter estimates that provide both the overall rate of change for the sample (e.g., fixed effects) and the within-person change (e.g., random effects). The relationship between a participant's responses to occupational stress or burnout, experimental grouping, time, and covariates is modeled as follows:

$$Y_{ti} = \beta_{00} + \beta_{01}treatment_i + \beta_{10}time_{ti} + \beta_{11}time_{ti} \times treatment_i + covariates_i + r_{0i} + r_{1i}time_{ti} + \varepsilon_{ij}$$

where Y_{ti} is a participant's responses to occupational stress or burnout at time t , β_{00} is the mean frequency of responses to occupational stress across all timepoints and individuals, $\beta_{01}treatment$ is the main effect of the treatment group, $\beta_{10}time_{ti}$ is the main effect of time, $\beta_{11}time_{ti} \times treatment_i$ is the interaction effect of time and treatment group, $covariates_i$ are the any variables found to differ significantly between the treatment and waitlist-control groups following randomization, r_{0i} is the variation of the frequency of responses to occupational stress between participants, $r_{1i}time_{ti}$ is the amount of variation estimated among participants with experimental grouping as a predictor, and ε_{ij} is the variation within students (see Miksza & Elpus, 2018; Raudenbush & Bryk, 2002).

Effect Sizes

It is generally accepted that effect sizes are a better indicator of intervention efficacy or effectiveness than statistical significance (Thompson, 1996; Valentine & Cooper, 2003). Since researchers who have previously

examined the efficacy of mindfulness interventions on teacher occupational stress and burnout provided Cohen's d as an estimate of post-intervention outcomes unadjusted for baseline measures, I adopted this convention for the present study. However, it should be mentioned that there is a lack of consensus regarding the appropriateness of calculating Cohen's d for multi-level model (see Baguley, 2002; Lorah, 2018). I calculated Cohen's d for my linear growth models that expressed the change in occupational stress and burnout because it is common practice in mindfulness intervention literature (e.g., Jennings et al., 2013; Roeser et al., 2013), but urge readers to cautiously interpret these and all estimates of effect size.

I calculated effect sizes for mean group responses to occupational stress and burnout at posttest using this formula:

Cohen's d = difference in unadjusted means / pooled within-group standard deviation of unadjusted means.

Cohen's (1988) d , one of the most widely used equations for determining effect size, offers an estimate of the effect of randomization to the treatment or waitlist-control group on outcomes without taking into effect baseline measures. Cohen (1988) suggested that "small" effect sizes range from 0.20 to 0.39; "medium" effect sizes range from 0.40 to 0.59; and "large" effect sizes are 0.60 or greater. "Small" effects are ones that are statistically significant but would be difficult to perceive with the naked eye, such as the height difference between 15-year-old and 16-year-old girls in the United States. While a "medium" effect could be perceived with the naked eye, a

“large” effect would be as obvious as the difference between 13-year-old girls and 18-year-old girls. Effect sizes under 0.20 are considered trivial, even if they are statistically significant. However, Cohen (1988) urged that researchers use discretion when applying these somewhat arbitrary labels because “large” effects are not necessarily better than “small” effects. For instance, a difference in 0.1 regarding standardized test scores could have life-altering implications. In order to understand the implications of effect size in the real world, Durlak (2009) suggested examining prior research.

Covariates

Any significant mean group differences across demographic or descriptive variables that were present following random assignment were entered into OLS regression models as covariates to control for group differences.

Compliance

Participants were defined as compliers if they completed at least 80% of the intervention, which is a commonly-used cut-off (Dodd, White, & Williamson, 2012). I monitored and recorded treatment group participants’ total time spent on the Canvas site to determine if they were likely to have actually complied with the intervention. In the present study, compliance was measured with a dichotomous variable indicating having spent at least one hour, 59 minutes and nine seconds on the Canvas site, which is equivalent to 80% of the time that it would take to complete all of the embedded guided audio meditations. To account for differences in treatment effect as

a result of difference in adherence to the intervention, I conducted an intent to treat (IT) analysis.

Assessing Relations Between Demographic and Descriptive Variables and Baseline Measures of Occupational Stress and Burnout

Research question (3) seeks to determine potential relations between demographic and descriptive variables and responses to occupational stress and burnout at pretest. To identify any significant relations, I analyzed cross-sectional data using Ordinary Least Squares (OLS) regression. Multiple regression allows the estimation of the unique effect of each predictor variable on the outcome while controlling for the unique effects of the other predictor variables in the model (see Miksza & Elpus, 2018). The relationship between a participant's responses to occupational stress or burnout, experimental grouping, time, and covariates is modeled as follows:

$$Y_i = \alpha + \beta_1 Age_i + \beta_2 Gender_i + \beta_3 Race_i + \beta_4 Ethnicity_i + \beta_5 Grade_i + \beta_6 SchoolType_i + \beta_7 CareerLength_i + \beta_8 AttRisk_i + \beta_9 AttRiskBurn_i + \beta_{10} ExtraHours_i + \beta_{11} SalarySat_i + \beta_{12} AdminSup_i + \beta_{13} ParentSup_i + \varepsilon$$

where Y is either pretest responses of occupational stress or burnout for the i th individual, α is the intercept, $\beta_1 Age_i$ is the change in Y given a one-unit change in age, $\beta_2 Gender_i$ is the change in Y given a categorical change in gender, $\beta_3 Race_i$ is the change in Y given a categorical change in race, $\beta_4 Ethnicity_i$ is the change in Y given

the indication of Hispanic ethnicity, $\beta_5 Grade_i$ is the change in Y given the indication of teaching in a secondary school, $\beta_6 SchoolType_i$ is the change in Y given the indication of teaching in a private school, $\beta_7 CareerLength_i$ is the change in Y for each additional year spent teaching, $\beta_8 AttRisk_i$ is the change in Y given the indication of risk for attrition, $\beta_9 AttRiskBurn_i$ is the change in Y given the indication of risk for attrition due to burnout, $\beta_{10} ExtraHours_i$ is the change in Y for each additional extracurricular hour worked per week, $\beta_{11} SalarySat_i$ is the change in Y for every categorical decrease in salary satisfaction, $\beta_{12} AdminSup_i$ is the change in Y for every categorical decrease in perceived administrative support, $\beta_{13} ParentSup_i$ is the change in Y for every categorical decrease in perceived parental support, and ε is the error in the regression line.

Examining Participant Experiences and Determining Program Feasibility

Research question (4) seeks to explore the self-reported experiences of participants, while research question (5) seeks to determine the feasibility of the MTME. At pretest, all participants were asked to provide a brief written description of their motivations for undergoing mindfulness training. At posttest, treatment group participants were asked to provide brief written responses to questions regarding their experience with and the feasibility of the MTME. To answer research questions (4) and (5), I transformed participants' responses into quantitative data by first utilizing open coding to identify excerpts of the data that provided information about the participants' motivations for undergoing mindfulness training (Strauss & Corbin, 1998).

Then, I used axial coding to examine relationships between the established categories (Strauss & Corbin, 1998). Finally, I utilized simple descriptive quantitative statistics to calculate the frequency of each theme. Posttest questions for treatment group participants regarding experience and feasibility can be found in Appendix F.

A Comparison of Selected Related Studies

Table 3.07 provides a brief summary of three related studies of mindfulness training programs for teachers. Items of interest include (a) design; (b) sample size; (c) intervention; and (d) outcome variables.

Table 3.07

A Comparison of Selected Related Studies

Study	Design (<i>N</i>)	Intervention	Outcome Variables
Jennings et al. (2013)	Pretest-posttest control group (<i>N</i> = 50)	CARE (4-6 weeks, in-person)	Well-being, stress, burnout, efficacy
Roeser et al. (2013)	Pretest-posttest control group (<i>N</i> = 113)	MT program (8 weeks, in-person)	Focused attention, working memory, self-compassion, stress, burnout
Taylor et al. (2016)	Pretest-posttest control group w/missed methods (<i>N</i> = 59)	SMART (9 weeks, in-person)	Stress, efficacy for emotion regulation, compassion, forgiveness, coping

Chapter 4: Results

The purpose of this study was to examine the effects of a mindfulness-based intervention (MBI) on K-12 music educators' self-reported responses to occupational stress and burnout. Secondary purposes were (a) to explore the experiences of K-12 music educators who underwent a four-week web-based MBI; and (b) to determine if there were any potential relations between participants' demographic and descriptive data and their pretest levels of self-reported responses to occupational stress and burnout. As previously mentioned, the four-week web-based MBI was referred to as the Mindfulness Training for Music Educators (MTME). Four hundred and forty-four music teachers enrolled in this study, which utilized a pretest-posttest control group design (Shadish et al., 2002). As stated in Chapter 3, I randomly assigned participants to either the treatment or the waitlist-control group. All participants completed baseline assessments of music teacher stress and burnout before the four-week intervention period. The following research questions were developed for this study:

1. What is the effect of the MTME on K-12 music teachers' self-reported responses to occupational stress?
2. What is the effect of the MTME on K-12 music teachers' self-reported responses to burnout?
3. What are the relations between K-12 music teachers' age, gender, race, ethnicity, time spent in the profession, grade level taught (e.g., primary or secondary), type of school (e.g., public or private), extracurricular hours, perceived support from administrators, perceived support from

parents, and satisfaction with salary and self-reported responses to occupational stress and burnout at pretest?

4. What are the experiences of K-12 music teachers who participated in the MTME?
5. What aspects of the MTME do K-12 music teachers feel are feasible to undertake for the purpose of managing their responses to occupational stress and burnout?

Over the course of the four-week intervention period, participants in the treatment group completed the MTME at their own pace, while the waitlist-control group participants were not given access to the MTME. At the two-week mark, all participants completed a midpoint assessment of music teacher stress and burnout. Following the completion of the four-week intervention period, all participants completed a posttest measure of music teacher stress and burnout. At this point, treatment group participants were given the opportunity to provide free response feedback regarding their experiences with the training. Once all measures of occupational stress and burnout were completed, waitlist-control group participants were provided with full access to the MTME. However, no additional measurements of responses to occupational stress or burnout were collected or analyzed beyond this point.

In this chapter, I will present (a) information related to the recruitment and enrollment of the participants, including information regarding attrition and compliance; (b) results regarding treatment effectiveness; (c) results regarding participants' experiences with the MTME; (d) results regarding treatment feasibility;

and (e) results regarding relations between demographic and descriptive variables and outcome variables.

Initial Sample

In the following section I provided descriptive statistics for all demographic and descriptive variables measured within the initial sample.

Demographic and Descriptive Data

The initial sample included 444 in-service K-12 music teachers from the United States. Demographic and descriptive data from the initial sample are presented in the following tables. Frequency counts of gender, race, and ethnicity are presented in Table 4.01; means, standard deviations, and ranges of age, career length, and extracurricular hours are presented in Table 4.02; and frequency counts of school type, grade level taught, attrition risk, salary satisfaction, perceived administrative support, and perceived parental support are presented in Table 4.03.

Table 4.01

Frequency Counts of Gender, Race, and Ethnicity

Variable	<i>n</i>	%
Gender		
Female	339	76.35
Male	103	23.20
Trans male	1	0.23
Non-binary	1	0.23
Race		
White	418	94.14
Two or more races	15	3.38
Black/African American	5	1.13
Other	4	0.90
Asian	1	0.23
Hawaiian or Pacific Islander	1	0.23
Ethnicity		
Hispanic	20	4.50

Note. *N* = 444

Table 4.02

Means, Standard Deviations, and Ranges of Age, Career Length, and Extracurricular Hours

Variable	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Age	39.69	11.37	22	66
Career length	13.78	9.54	1	41
Extracurricular hours	15.87	13.33	0	100

Note. *N* = 444

Table 4.03

Frequency Counts of School Type, Grade Level Taught, Attrition Risk, Salary Satisfaction, Perceived Administrative Support, and Perceived Parental Support

Variable	<i>n</i>	%
School type		
Public	403	90.77
Private	41	9.23
Grade level taught		
Primary	201	45.27
Secondary	243	54.73
Attrition Risk		
Yes	13	2.93
Due to burnout	8	1.80
Satisfied with salary		
Strongly agree	55	12.39
Somewhat agree	215	48.24
Somewhat disagree	99	22.30
Strongly disagree	74	16.67
Perceives administration as supportive		
Strongly agree	183	41.20
Somewhat agree	174	39.19
Somewhat disagree	63	14.19
Strongly disagree	24	5.41
Perceives parents as supportive		
Strongly agree	85	19.14
Somewhat agree	221	49.77
Somewhat disagree	105	23.65
Strongly disagree	33	7.43

Note. *N* = 444

Group Equivalency Following Randomization

Participants were assessed on baseline self-reported responses to occupational stress and burnout following randomization. To assess equivalence of the treatment and waitlist-control groups following randomization, I used logistic regression to determine group equivalence on baseline responses to occupational stress, baseline responses to burnout, age, gender, race (White or non-White), Hispanic ethnicity, school type (public or private), grade level taught (primary or secondary), number of

extra-curricular hours, years spent teaching, risk for attrition, risk for attrition due to burnout, satisfaction with salary, perceived parental support, and perceived administrative support. As seen in Table 4.04, this logistic regression showed that the treatment and waitlist-control groups were statistically similar on all demographic variables, and there were no differences in music teachers' self-reported responses to occupational stress or burnout.

Table 4.04

Characteristics Related to Placement into Treatment Group

Predictor	OR	CI (95%)
Pretest stress	0.99	0.97-1.01
Pretest burnout	0.99	0.98-1.01
Age	0.98	0.95-1.01
Gender		
Female	1.04	0.64-1.69
Ethnicity		
Hispanic	1.47	0.56-3.87
Race		
Non-white	0.76	0.32-1.81
School type		
Private	1.38	0.69-2.74
Grade level		
Secondary	1.32	0.87-2.00
Career length	1.01	0.97-1.05
Attrition risk	0.90	0.12-6.80
Attrition due to burnout	4.26	0.31-58.33
Extracurricular hours	1.00	0.99-1.02
Salary satisfaction		
Somewhat agree	1.22	0.65-2.29
Somewhat disagree	1.10	0.54-2.23
Strongly disagree	1.21	0.56-2.62
Administrative support		
Somewhat agree	1.52	0.96-2.39
Somewhat disagree	1.86	0.97-3.55
Strongly disagree	1.37	0.44-2.91
Parent support		
Somewhat agree	1.01	0.60-1.71
Somewhat disagree	0.66	0.35-1.23
Strongly disagree	1.75	0.72-4.70

Note. $N = 444$. Omitted reference categories for categorical variables are as follows: male, non-Hispanic, White, public school, primary school, salary satisfaction – strongly agree, a lack of perceived administrative support – strongly agree, and a lack of perceived parental support – strongly agree.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Attrition

At the beginning of the study, 444 participants provided complete demographic data, descriptive data, and baseline measurements of responses to occupational stress and burnout. For a variety of reasons, 194 participants failed to provide complete data or withdrew from the study, resulting in a final sample of 250 participants. Specific causes of attrition and mean scores of baseline responses to occupational stress and burnout are presented in Table 4.05.

Table 4.05

Study Enrollment and Causes of Attrition

	Treatment			Control		
	<i>n</i>	<i>M</i> _{stress} (<i>SD</i>)	<i>M</i> _{burnout} (<i>SD</i>)	<i>n</i>	<i>M</i> _{stress} (<i>SD</i>)	<i>M</i> _{burnout} (<i>SD</i>)
Initial Enrollment	223	41.22 (14.59)	28.44 (20.89)	221	42.61 (14.17)	30.43 (19.69)
Attrition						
Withdrew	22	41.29 (15.10)	28.27 (22.95)	0	-	-
Midpoint	83	40.98 (15.07)	27.20 (20.16)	31	45.71 (15.21)	31.61 (20.06)
Posttest	28	45.35 (14.67)	36.99 (24.14)	30	44.1 (14.83)	34.05 (21.70)
Final Enrollment	90	40.17 (14.09)	26.91 (19.76)	160	41.69 (13.77)	29.52 (19.20)

There was higher attrition in the treatment group, with more than double the number of music teachers failing to complete all measures or withdrawing from the study as the waitlist-control group. The participants

who withdrew cited reasons such as being too busy or encountering an unexpected illness.

Group Equivalency Following Attrition

As seen in Table 4.06, results of logistic regression showed that the treatment and waitlist-control group non-completers were statistically similar on all demographic, descriptive, and outcome variables. Ultimately, an analysis of participants who left the study from the treatment group compared to those who left the study from the control group indicated that there were no significant differences among demographic and descriptive variables. This provides evidences that differential attrition is not a threat to the internal validity of this study.

Table 4.06

Characteristics Related to Differential Attrition Between Treatment and Waitlist-Control Groups

Predictor	OR	CI (95%)
Pretest stress	0.99	0.96-1.03
Pretest burnout	0.99	0.97-1.02
Age	0.99	0.94-1.05
Gender		
Female	0.61	0.25-1.47
Ethnicity		
Hispanic	1.11	0.21-5.81
Race		
Non-white	0.70	0.16-3.04
School type		
Private	0.85	0.27-2.65
Grade level		
Secondary	1.19	0.59-2.40
Career length	1.00	0.94-1.07
Attrition risk	1.20	0.08-17.14
Attrition due to burnout	1.72	0.05-60.66
Extracurricular hours	0.99	0.97-1.02
Salary satisfaction		
Somewhat agree	1.07	0.22-2.56
Somewhat disagree	0.49	0.13-1.86
Strongly disagree	0.54	0.13-2.20
Administrative support		
Somewhat agree	1.07	0.51-2.25
Somewhat disagree	2.25	0.72-7.00
Strongly disagree	0.86	0.14-5.22
Parent support		
Somewhat agree	1.97	0.82-4.70
Somewhat disagree	1.12	0.41-3.02
Strongly disagree	9.88	0.91-107.54

Note. $N = 194$. Omitted reference categories for categorical variables are as follows: male, non-Hispanic, White, public school, primary school, salary satisfaction – strongly agree, a lack of perceived administrative support – strongly agree, and a lack of perceived parental support – strongly agree.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Intervention Compliance

As mentioned in Chapter 3, compliance was measured as spending at least 80% of the total time required to complete all guided audio meditations on the Canvas site. Of the 90 participants in the treatment group who completed the study, 22.22% ($n = 20$) did not spend enough time on the Canvas site that hosted the MTME to comply with the intervention. Results of this logistic regression showed that the compliers and non-compliers were equivalent with respect to all demographic variables except for school type (public or private). Specifically, teaching in a private school was associated with being 94% less likely to comply with the study ($OR = 0.06$, 95% $CI = 0.00 - 0.61$). There were no significant differences in compliers' and non-compliers' self-reported responses to occupational stress or burnout. See Table 4.07 for the results of logistic regression to determine equivalency between compliers and non-compliers.

Table 4.07

Characteristics Related to Intervention Compliance

Predictor	OR	CI (95%)
Pretest stress	0.99	0.93-1.06
Pretest burnout	0.99	0.95-1.03
Age	1.11	0.96-1.29
Gender	0.70	0.13-3.64
Ethnicity		
Hispanic	0.19	0.02-2.31
Race		
Non-white	0.52	0.06-4.83
School type		
Private	0.06*	0.01-0.61
Grade level		
Secondary	0.44	0.13-1.56
Career length	0.95	0.82-1.11
Attrition risk	13.74	0.46-407.77
Attrition due to burnout	1	
Extracurricular hours	1.00	0.94-1.07
Salary satisfaction		
Somewhat agree	2.99	0.42-21.40
Somewhat disagree	7.58	0.69-83.44
Strongly disagree	3.52	0.28-43.76
Administrative support		
Somewhat agree	0.66	0.14-3.07
Somewhat disagree	1.56	0.17-14.50
Strongly disagree	0.62	0.04-10.61
Parent support		
Somewhat agree	0.56	0.10-3.03
Somewhat disagree	1.46	0.12-18.09
Strongly disagree	0.55	0.00-49.76

Note. $N = 20$. Omitted reference categories for categorical variables are as follows: non-Hispanic, White, public school, primary school, salary satisfaction – strongly agree, a lack of perceived administrative support – strongly agree, and a lack of perceived parental support – strongly agree.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Final Sample

In the next section, I summarized descriptive statistics for all demographic and descriptive variables measured in the final sample.

Demographic Data

After removing participants who withdrew, failed to complete midpoint measures, or failed to complete posttest measures, the final sample was comprised of 250 in-service K-12 music teachers. Demographic and descriptive data from the Initial sample are presented in the following tables. Specifically, frequency counts of gender, race, and ethnicity are presented in Table 4.08; means, standard deviations, and ranges of age, career length, and extracurricular hours are presented in Table 4.09; and frequency counts of school type, grade level taught, attrition risk, salary satisfaction, perceived administrative support, and perceived parental support are presented in Table 4.10.

Table 4.08

Demographics of the Final Sample

Variable	<i>n</i>	%
Gender		
Female	192	76.80
Male	57	22.80
Non-binary	1	0.40
Race		
White	235	94.00
Two or more races	8	3.20
Black/African American	3	1.20
Other	2	0.80
Asian	1	0.40
Hawaiian or Pacific Islander	1	0.40
Ethnicity		
Hispanic	11	4.40

Note. *N* = 250

Table 4.09

*Means, Standard Deviations, and Ranges of Age, Career Length, and**Extracurricular Hours for the Final Sample*

Variable	<i>M</i>	<i>SD</i>	<i>Range</i>	
			<i>Min</i>	<i>Max</i>
Age	40.06	11.54	22	66
Career length	13.97	9.37	1	40
Extracurricular hours	14.38	11.92	0	70

Note. *N* = 250

Table 4.10

Frequency Counts of School Type, Grade Level Taught, Attrition Risk, Salary Satisfaction, Perceived Administrative Support, and Perceived Parental Support for the Final Sample

Variable	<i>n</i>	%
School type		
Public	227	90.80
Private	23	9.20
Grade level taught		
Primary	128	51.20
Secondary	122	48.80
Attrition Risk		
Yes	4	1.60
Due to burnout	3	1.20
Satisfied with salary		
Strongly agree	33	13.20
Somewhat agree	124	49.60
Somewhat disagree	56	22.40
Strongly disagree	37	14.80
Perceives administration as supportive		
Strongly agree	104	41.60
Somewhat agree	97	38.80
Somewhat disagree	34	13.60
Strongly disagree	15	6.00
Perceives parents as supportive		
Strongly agree	44	17.60
Somewhat agree	127	50.80
Somewhat disagree	56	22.40
Strongly disagree	23	9.20

Note. *N* = 250

Treatment Effectiveness

As mentioned in Chapter 3, I analysed the experimental data using mixed effects maximum likelihood regression to account for repeated measures over time. The level one variable was time period (e.g., pretest, midpoint, posttest), while the level two variable was the participant. This model allowed me to model the change in

responses to occupational stress and burnout over time while accounting for time-invariant individual characteristics.

Research Question 1: Treatment Effectiveness on Occupational Stress

In the following section, I described the three models that were tested. In the unconditional linear growth model, time was included as a level one predictor variable. This model demonstrated rate of change in responses to occupational stress over time. In the conditional linear growth model, a dummy variable indicating random assignment to the treatment or waitlist-control group was added as a level two predictor. This allowed me to examine the effects of the interaction of time and treatment (MTME) on responses to occupational stress. In the third and final model, I included the variable representing a perceived lack of administrative support to increase precision, as this variable was statistically dissimilar between groups following attrition.

Unconditional linear growth model. An unconditional linear growth model was tested for responses to occupational stress, which was assessed at pretest (week zero), midpoint (week two), and posttest (week four). The results of this model indicated a mean baseline (e.g., pretest) occupational stress score of 46.89 and a mean rate of change of -3.13 points per increase in unit of time (e.g., two-week increment). Time was significantly related to responses to occupational stress ($\beta = -3.13, p < .001$), which suggests that responses to occupational stress decreased across time. These estimates are fixed effects, meaning that they represent mean effects across participants. The results of the random effects provide an estimate of the variation in responses to occupational stress within and between participants (see Table 4.11)

Conditional Linear Growth Model with Treatment Group Higher Order

Predictors. The next model includes an indicator of whether participants were randomly assigned to the treatment or waitlist-control group. The results of this model indicated that the mean rate of change in responses to occupational stress varied significantly ($p < .001$) as a result of group assignment. Specifically, the interaction effect of time and group assignment suggests that responses to occupational stress reported by treatment group participants decreased by 5.63 points more per time point (e.g., two-week increment) than for participants in the waitlist-control group. Because of the significant interaction between treatment group and time, the main effects on treatment and time are not interpretable. However, a post-estimation calculation of average marginal effects indicated that treatment group participants reported reductions in responses to occupational stress at a much faster rate at both midpoint and posttest than those in the waitlist-control group (see Table 4.12). Finally, the decrease in LL and AIC fit statistics associated with the addition of group assignment to the conditional model indicate that this model fits the data better than the unconditional growth model (see Table 4.11).

Conditional Linear Growth Model with Treatment Group Higher Order

Predictors and Covariate. The final and full model includes the addition of perceived lack of administrative support as a covariate, which was shown to significantly differ between the treatment and waitlist-control groups following random assignment. The results of this model indicate that the mean rate of change in responses to occupational stress varied significantly ($p < .001$) as a result of random assignment to the treatment group and a perceived lack of administrative support.

Specifically, the interaction effect of time and group assignment suggests that responses to occupational stress reported by treatment group participants decreased by 5.63 points more per time point than for participants in the waitlist-control group, while responses to occupational stress increased by 4.87 points for every categorical move toward strongly disagreeing that one's administration is supportive. Due to the significant interaction between treatment group and time, the simple effects on treatment and time are not interpretable. However, a post-estimation calculation of average marginal effects indicates that treatment group participants reported reductions in responses to occupational stress at a much faster rate than those in the waitlist-control group at both midpoint and posttest (see Table 4.12). The decrease in LL and AIC fit statistics associated with the addition of group assignment to the conditional model indicate that this model fits the data better than the unconditional growth model (see Table 4.11). As mentioned in Chapter 3, effect size estimates were obtained by comparing unadjusted means the difference between the treatment group and waitlist-control group in responses to occupational stress. A Cohen's d of 0.49 indicates that on average, the treatment group reported a medium reduction in responses to occupational stress.

Table 4.11

Parameter Estimates and Standard Errors for Linear Growth Models of the Effects of Group Assignment and Time on Music Teachers' Responses to Occupational Stress

Parameter and Fit Statistic	Model					
	Unconditional		Linear		Full	
	β	SE	β	SE	β	SE
Fixed effects						
Intercept ^a	41.37	0.98	42.06	1.18	33.30	2.09
Slope ^b	-3.13***	0.31	-1.10	0.35	-1.10	0.35
Treatment			-1.92	1.96	-2.46	1.88
Treatment x time					-5.63***	0.58
Covariate Admin					4.87***	0.98
Random effects						
Variances						
Intercept						16.4
Residual	198.96	19.21	188.28	18.0	170.17	2
	46.71	2.95	39.41	3	39.41	
				2.49		2.49
<i>df</i>	4		6		7	
LL	-2833.59		-2783.21		-2771.43	
AIC	5675.18		5578.41		5556.87	

Note. $N = 250$. *Intercept* refers to responses to occupational stress at pretest; *slope* refers to the rate of change in responses to occupational stress across the four-week intervention period; and *admin* refers to a perceived lack of administrative support. LL = log likelihood; AIC = Akaike's information criterion.

^aSample mean responses to occupational stress at pretest. ^bMean change per two week period in responses to occupational stress.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4.12

Average Marginal Effects at Pretest, Midpoint, and Posttest by Group

	Treatment		Waitlist-Control	
	Margin	SE	Margin	SE
Week 0 (Pretest)	39.80	1.50	42.26	1.13
Week 2 (Midpoint)	33.07	1.43	41.15	1.07
Week 4 (Posttest)	26.33	1.50	40.05	1.13

Figure 4.01

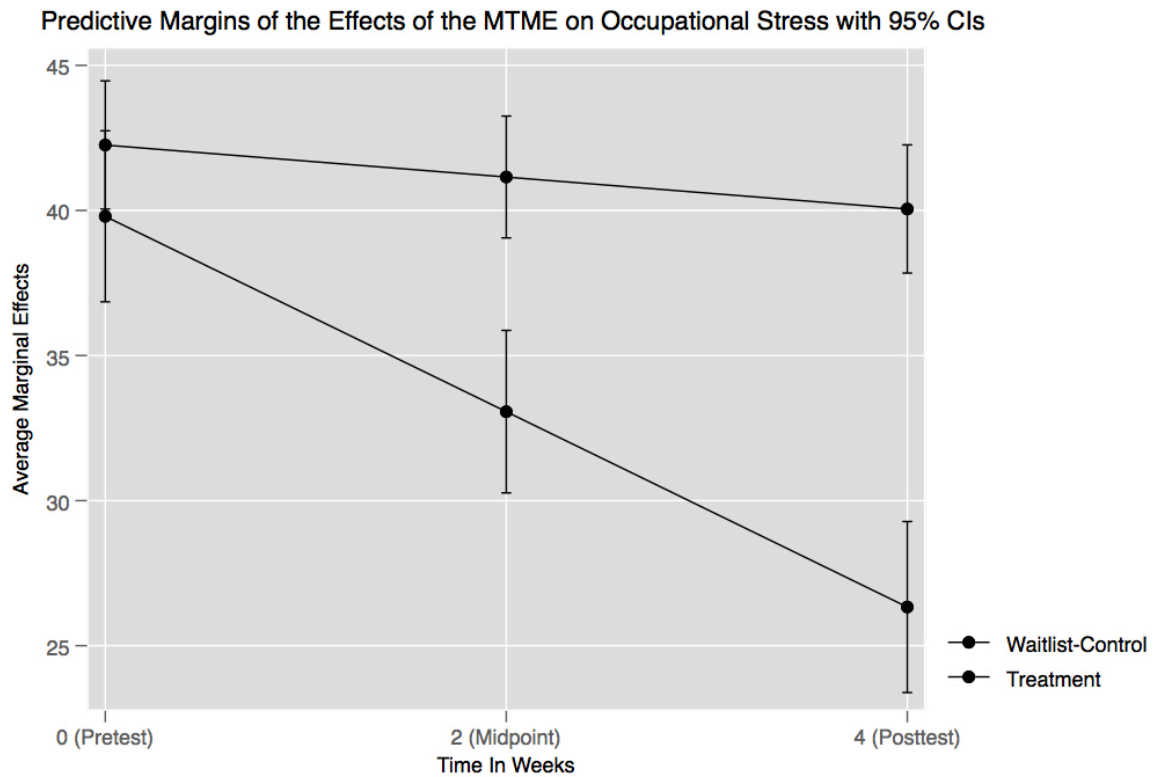


Figure 4.01 illustrates the trajectory of change in responses to occupational stress across the four-week intervention period for both the treatment and waitlist-control groups. This figure indicates not only that the trajectory of change is linear

but provides visual evidence that the mean rate of change is substantially steeper for the treatment group than it is for the waitlist-control group.

Research Question 2: Treatment Effectiveness on Burnout

In the following section, I described the three models that were tested. In the unconditional linear growth model, time was included as a level one predictor variable. This model demonstrated the rate of change in responses to burnout over time. In the conditional linear growth model, a dummy variable indicating random assignment to the treatment or waitlist-control group was added as a level two predictor. This allowed me to examine the effects of the interaction of time and treatment (MTME) on responses to occupational stress. In the third and final model, I included the variable representing a perceived lack of administrative support to increase precision, as this variable was statistically dissimilar between groups following attrition.

Unconditional Linear Growth Model. An unconditional linear growth model was tested for responses to burnout, which was assessed at pretest (week zero), midpoint (week two), and posttest (week four). The results of this model indicated mean baseline (e.g., pretest) burnout scores of 29.86 and a mean rate of change of -0.89 points per increase in unit of time (e.g., two-week increment). Time was significantly related to responses to burnout ($\beta = -0.89, p < .05$), which suggests that responses to burnout decreased across time. These estimates are fixed effects, so they represent mean effects across participants, while results of the random effects provide an estimate of the variation in responses to burnout within and between participants (see Table 4.13)

Conditional Linear Growth Model with Treatment Group Higher Order

Predictors. The next model includes an indicator of whether participants were randomly assigned to the treatment or waitlist-control group. The results of this model indicate that the mean rate of change in responses to burnout varies significantly ($p < .001$) as a result of group assignment. Specifically, the interaction effect of time and group assignment suggests that responses to burnout reported by treatment group participants decreased by 4.96 points more per time point (e.g., two-week increment) than for participants in the waitlist-control group. Because of the significant interaction between treatment group and time, the simple effects on treatment and time are not interpretable. However, a post-estimation calculation of average marginal effects indicates that treatment group participants reported reductions in responses to burnout at a much faster rate at both midpoint and posttest than those in the waitlist-control group (see Table 4.14). Finally, the decrease in LL and AIC fit statistics associated with the addition of group assignment to the conditional model indicate that this model fits the data better than the unconditional growth model (see Table 4.13).

Conditional Linear Growth Model with Treatment Group Higher Order

Predictors and Covariate. The final and full model includes the addition of perceived lack of administrative support as a covariate. Since this descriptive variable was found to be statistically dissimilar between the treatment and waitlist-control groups following attrition, it was included in the final model to increase precision. The results of this model indicate that the mean rate of change in responses to burnout varies significantly ($p < .001$) as a result of random assignment to the treatment group

and a perceived lack of administrative support. Specifically, the interaction effect of time and group assignment suggests that responses to burnout reported by treatment group participants decreased by 4.98 points more per time point than for participants in the waitlist-control group, while responses to burnout increased by 5.73 points for every categorical move toward strongly disagreeing that one's administration is supportive. Due to the significant interaction between treatment group and time, the simple effects on treatment and time are not interpretable. However, a post-estimation calculation of average marginal effects indicated that treatment group participants reported reductions in responses to burnout at a much faster rate than those in the waitlist-control group at both midpoint and posttest (see Table 4.14). The decrease in LL and AIC fit statistics associated with the addition of group assignment to the conditional model indicate that this model fits the data better than the unconditional growth model (see Table 4.13). Effect size estimates were obtained by comparing unadjusted means the difference between the treatment group and waitlist-control group in responses to burnout. A Cohen's d of 0.41 indicates that on average, the treatment group reported a medium reduction in responses to occupational stress.

Table 4.13

Parameter Estimates and Standard Errors for Linear Growth Models of the Effects of Group Assignment and Time on Music Teachers' Responses to Burnout

Parameter and Fit Statistic	Model					
	Unconditional		Linear		Full	
	β	SE	β	SE	β	SE
Fixed effects						
Intercept ^a	29.86***	1.43	30.11***	1.54	19.79***	2.78
Slope ^b	-0.89*	0.38	0.90	0.46	-0.90	0.46
Treatment			-3.14	2.57	-3.78	2.49
Treatment x time			-4.96***	0.77	-4.98***	0.77
Covariate Admin					5.73***	1.30
Random effects						
Variances						
Intercept	338.49	32.50	325.26	31.1	300.15	28.90
Residual	73.23	4.63	67.56	4	67.56	4.27
				4.27		
df	4		6		7	
LL	-3011.69		-2986.22		-2976.85	
AIC	6031.39		5984.44		5967.70	

Note. $N = 250$. *Intercept* refers to responses to burnout at pretest; *slope* refers to the rate of change in responses to burnout across the four-week intervention period; and *admin* refers to a perceived lack of administrative support. LL = log likelihood; AIC = Akaike's information criterion.

^aSample mean responses to burnout at pretest. ^bMean change per two week period

in responses to burnout.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4.14

Average Marginal Effects at Pretest, Midpoint, and Posttest by Group

	Treatment		Waitlist-Control	
	Margin	SE	Margin	SE
Week 0 (Pretest)	26.56	1.99	30.34	1.49
Week 2 (Midpoint)	22.50	1.90	31.24	1.42
Week 4 (Posttest)	18.44	1.99	32.14	1.49

Figure 4.02

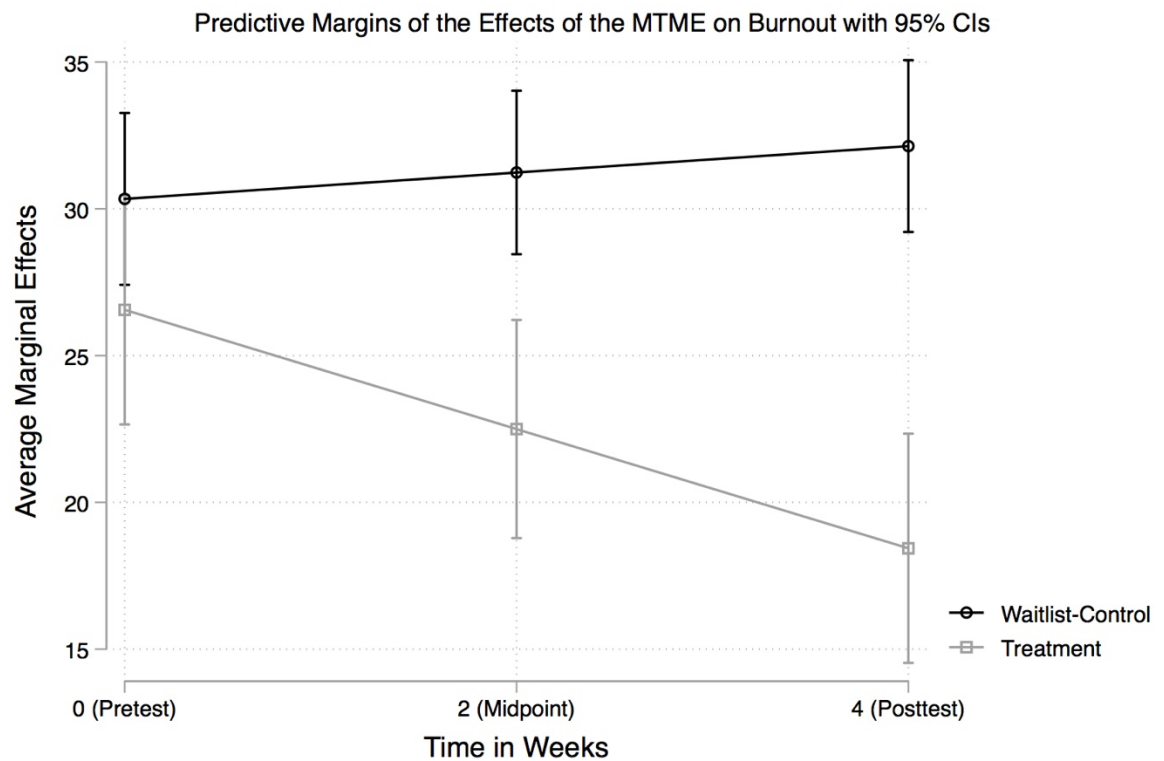


Figure 4.02 includes the trajectory of change in responses to burnout across the four-week intervention period for both the treatment and waitlist-control groups. This

figure indicates not only that the trajectory of change is linear but provides visual evidence that the mean rate of change is substantially steeper for the treatment group than it is for the waitlist-control group.

Research Question 3: Relations Between Demographic and Descriptive Variables and Outcome Variables

To answer the third research question, I used OLS regression to determine the influence of demographic and descriptive variables on baseline measures of self-reported responses to occupational stress and burnout. Since the analyses required to answer research question three were cross-sectional and not experimental, they were completed at pretest with the full initial sample ($N = 444$).

Occupational Stress. As seen in Table 4.15, the results of OLS regression suggested that young age (30 to 39 & 40 to 49), being female, salary satisfaction, perceived administrative support, and perceived parental support were significant predictors of increased responses to occupational stress in this sample of in-service music teachers. Additionally, female participants were more likely to enroll in the study.

Burnout. As seen in Table 4.15, the results of OLS regression suggested that teaching secondary school, salary satisfaction, perceived administrative support, and perceived parental support were significant predictors of increased responses to burnout in this sample of in-service music teachers. Further, for each additional extracurricular hour worked, there was small but significant decrease in burnout.

Table 4.15

Effects of Demographic and Descriptive Variables on Music Teachers' Self-Reported Responses to Occupational Stress and Burnout at Pretest

Variable	Occupational Stress		Burnout	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Age (18-29)	4.73	2.92	1.46	4.13
Age (30 to 39)	5.00*	2.28	3.71	3.23
Age (40 to 49)	6.24***	2.27	3.92	3.22
Gender				
Female	4.59***	1.55	-0.32	2.19
Trans male	24.03	14.75	11.74	20.87
Non-binary	-0.04	13.42	-12.99	18.99
Race				
Non-white	1.44	2.80	2.62	3.95
Hispanic ethnicity				
Hispanic	1.82	3.14	7.69	4.44
Grade level				
Secondary	0.80	1.32	4.57*	1.87
School type				
Private school	-2.87	2.19	-3.35	3.09
Time teaching				
<7 years	1.60	2.19	3.89	3.10
<25 years	-1.95	2.51	-3.12	3.56
<31 years	-2.26	3.17	2.06	4.84
Attrition risk	5.58	6.66	7.42	9.42
Attrition & burnout	13.08	8.09	22.55	11.45
Extracurricular hours	-0.00	0.05	-0.14*	0.07
Salary satisfaction				
Somewhat agree	6.34***	2.00	6.72*	2.82
Somewhat disagree	7.78***	2.27	6.77*	3.21
Strongly disagree	11.88***	2.43	13.49***	3.44
Admin support				
Somewhat agree	5.62***	1.45	5.13*	2.05
Somewhat disagree	10.05***	2.00	14.21***	2.83
Strongly disagree	10.92***	2.96	16.11***	4.19
Parent support				
Somewhat agree	1.73	1.70	1.17	2.41
Somewhat disagree	5.47*	1.99	9.50***	2.81
Strongly disagree	1.54	2.93	7.62	4.15

Adj. R^2	0.19	<i>Note.</i> $N = 444$.
N	443	

Omitted

reference categories for categorical variables are as follows: male, non-Hispanic, White, public school, primary school, salary satisfaction – strongly agree, a lack of perceived administrative support – strongly agree, and a lack of perceived parental support – strongly agree.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Data Transformation

I answered research questions (4) and (5) by providing examples of participants' written responses to demonstrate how I transformed qualitative data into quantitative data. I generated quantitative data by first utilizing open coding to identify excerpts of the data that provided information about the participants' motivations for undergoing mindfulness training (Strauss & Corbin, 1998), and then used axial coding to examine relationships between the established categories (Strauss & Corbin, 1998). I **bolded** key words or phrases in participant responses that exemplify the broader theme. Since one response can contain multiple themes, frequency counts from analyses completed at pretest will not necessarily add up to 444, or the total number of responses from the initial sample. Similarly, frequency counts from analyses completed at posttest with treatment group participants ($n = 90$) will not necessarily add up to 90.

Research Question 4: Participants' Self-Described Experiences

In order to better understand the experience of participants in the MTME, I asked open-ended questions about (a) motivations for participation, (b) occupational stress during the intervention period, and (c) responses to occupational stress during the intervention period. I asked all participants in the initial sample ($N = 444$) about their motivations for participating in the MTME. Because this cross-sectional analysis could be completed at pretest, the responses of all 444 initial participants are represented. However, analyses that took place at posttest (e.g., occupational stress during the MTME, responses to occupational stress, the role of MTME in occupational stress responses) were conducted with the sample of treatment group participants who provided complete data from pretest to posttest ($n = 90$).

Motivations for Participation

Participants' motivations for participation in MTME were measured through their responses to the open-ended question, "Why are you interested in undergoing mindfulness training?" The following seven themes, presented from most frequently occurring to least frequently occurring, emerged following open and axial coding of participant responses. See Table 4.16 for a breakdown of the themes, participant indicator terms that generated the themes, and frequency counts.

Table 4.16

Final Theme List, Participant Indicator Terms, and Frequency Counts for

Motivations for Participation Reported by Initial Sample

Theme (<i>n</i> , %)	Participant Indicator Terms
Interest (<i>n</i> = 203, 45.72%)	Interested in learning, friend or family recommendation, school/district mindfulness initiative, read or attended something about mindfulness, interested in how mindfulness relates to music, interested in benefits
Stress management (<i>n</i> = 153, 34.46%)	Reduce stress, first year of teaching is stressful, prevent stress, cope with stressful situations, work stress is affecting other areas of life, too busy
Benefit their students (<i>n</i> = 135, 30.41%)	To incorporate mindfulness into teaching, to reduce student suffering, to support students in poverty, being a better teacher, better classroom management
Previous experience (<i>n</i> = 120, 27.03%)	Prior experience with mindfulness, prior experience with other contemplative practice, inconsistent prior experience
Self-care (<i>n</i> = 78, 17.57%)	Self-care, more present, better/more sleep, "I need it," mindfulness is a personal goal, work-life balance, reduce guilt
Treatment (<i>n</i> = 32, 7.21%)	To treat anxiety, to treat depression, to treat ADD/ADHD symptoms, to cope with a medical diagnosis/situation
Burnout (<i>n</i> = 24, 5.41%)	Reduce burnout, prevent burnout

Note. *N* = 444. Since one response can contain multiple themes, percentages will not necessarily total 100%.

Interest. The most frequently occurring motivation (*n* = 203, 45.72%) for undergoing mindfulness training was an interest in or a curiosity about mindfulness training. Phrases that helped to generate this theme include (a)

interest generated by a friend or family member speaking of their mindfulness practice, (b) having read an article or attended a session on mindfulness in the past, (c) an interest in how mindfulness relates to music, (d) exposure from a school or district-level campaign to integrate mindfulness practices into the classroom, and (e) an interest in the benefits of mindfulness practice. One participant wrote, “There has been a lot of talk about mindfulness in our building. I am **interested** to learn how it can benefit me.” This participant had been hearing about mindfulness at their school and was motivated to enroll so that they could gain firsthand experience with the practice and its benefits. Another participant wrote, “I am always **interested** in anything that will help me as a teacher, or person. It seems like it will be **interesting**, at the very least.” This quote references both an interest in potential positive benefits as well as a global curiosity regarding the entire experience of mindfulness training. Another participant cited both a school-level interest in mindfulness as well their personal interest in an intervention specifically for music teachers: “Our entire staff is **interested in mindfulness**. I would love something that is tailored for **music teachers**.”

Stress management. Stress, which is one of the dependent variables under examination in this study, was cited by 34.46% of participants ($n = 153$) as a motivation for enrolling in this study. Words and phrases that helped to generate this theme included (a) stress, (b) stress reduction, (c) first-year teacher stress, (d) preventing stress, (e) coping with stress, (f) being too busy, and (g) stress affecting others. One participant cited their desire for a “safe,

non-drug way to **reduce stress**,” while another participant wrote, “The **stress level** in my job is through the roof. I don't want it to affect my teaching (that burden also affects my **stress**). I love my job and do not want to retire, yet! There is no one to replace me (so they say) or [who] can do this job; I can see why.” In these responses, participants acknowledged loving their jobs as music teachers, but needing a non-medicinal way to manage the inevitable stress associated with the profession.

Benefit their students. Over a quarter of the initial sample (30.41%, $n = 135$) indicated that they were interested in undergoing mindfulness training so that they could use it in their classroom to support their students. Specifically, teachers referenced goals such as (a) incorporating mindfulness in their teaching, (b) reducing student suffering, (c) supporting students in poverty, (d) being a better teacher, and (e) better classroom management. The following quote is an example of being motivated to undergo mindfulness training to reduce student suffering: “I am most interested in finding out some **techniques that I can incorporate into my music classroom**. As we have more and more students that have been touched by some sort of trauma in their lives, I **want a way to help them in my classroom** as well,” while another wrote of their desire for their mindfulness training to benefit their students in other ways: “I am also interested in applying any techniques learned in this training **to help my students reduce the stress** in their lives, thereby **helping them to become better musicians and people** in general.” This response suggests that this teacher hoped that their own mindfulness training might benefit their own students in a

variety of ways, including by reducing their stress, and helping them to become better musicians and people.

Previous experience. One hundred twenty participants (27.03%) referenced previous experience practicing mindfulness as a motivation for participation. Responses that helped to generate the theme of previous exposure typically referenced (a) prior personal experience with mindfulness practice, (b) prior personal experience with another contemplative practice (e.g., yoga), or (c) unsuccessful and/or inconsistent attempts to begin a mindfulness practice. The following participant response is an example of citing previous attempts at undertaking mindfulness training as motivation for enrolling in the present study: “I have **done it before**, but I have **always struggled** with making it a regular habit. I would **like to see how I do** with the **accountability** of a study.” This participant cited their previous experience, but also mentioned their desire for some external structure to hold them accountable, which had been an issue in their previous personal practice. Another participant wrote, “I **was meditating** with ‘Headspace’ during the 2016-2017 school year and noticed MAJOR improvements in how I functioned at school and even in student engagement. I **have gotten away from the practice** in recent years but am making a concerted effort to make mindfulness a part of my life again.” This participant also struggled with maintaining their meditative practice but reported experiencing significant improvements when their practice was consistent and therefore desired to return to a routine.

Self-care. An interest in self-care was cited as a motivation for undergoing mindfulness training by 17.57% of participants ($n = 78$). Participant words and phrases that helped to generate this theme include (a) prioritizing self-care, (b) being more present, (c) getting more or a better quality of sleep, (d) feeling a personal need for general well-being, (e) being more mindful, (f) achieving better work-life balance, and (g) experiencing less guilt. Although these motivations are diverse, they all are related to self-care and overall well-being. The following responses are varied, but all relate to taking care of oneself. For instance, one participant mentioned wanting to “garner **self-care information**,” while another wanted “to practice **being in the present moment**.” Another participant remarked that mindfulness has been recommended to them as a “strategy for **improving sleep**,” while another mentioned that they are “learning to **take time for myself**.”

Treatment. Thirty-two participants, or 7.21% of the initial sample indicated that they were interested in undergoing mindfulness training as a treatment for physical or mental health purposes. These participants cited the desire for help with managing anxiety, depression, Attention-Deficit Disorder, or an unidentified personal medical situation. One teacher wrote, “Approximately 9 months ago, I began noticing symptoms of anxiety and I am currently taking two medications to **treat depression and anxiety**. Mindfulness has been encouraged as a strategy to **treat my anxiety**.” Another participant mentioned that they were recently diagnosed with breast cancer and “could use this **to help**.” They went on, “**My doctor has asked me to start yoga** but I’d like something I could **practice during the school day** as well.” In general,

these 32 participants had heard of mindfulness as a potential treatment to help with their physical or mental health and were eager to see if the MTME might help them to reduce their suffering.

Manage burnout. Like stress, burnout is also a dependent variable under examination in this study. A more serious condition than stress, burnout prevention or reduction was cited by just 5.41% of participants ($n = 24$) as a motivation for undergoing mindfulness training. The following quote from a participant exemplifies the seriousness of burnout:

I am a Mom, high school band director, and have two very active gifted/talented children (11 & 7) with crazy schedules. My husband is a high school principal. Trying to find balance is VERY difficult, and I often find myself very stressed. I feel guilty if I don't spend enough time in either spectrum and responsible for shouldering the weight. **Burnout is imminent.** I do follow a few Facebook pages regarding meditation/Zen practices, and read when I can. This is clearly something that I need to spend more time focusing on.

It is clear that this participant has been experiencing prolonged and intense periods of occupational and personal stress. They fear that burnout, which can result from prolonged exposure to stress, is “imminent” if they do not somehow intervene.

Occupational Stressors During the MTME

I asked the 90 treatment group participants who provided complete data to briefly describe a stressful event that they encountered in their role as a music teacher in the past four weeks. This question invited participants to provide me with a snapshot of some of the occupational stress that they experienced during the intervention period. Five themes emerged from participants' descriptions of their occupational stress during the MTME. See Table 4.17 for a breakdown of the themes, participant indicator terms that

generated the themes, and frequency counts of the occupational stressors reported by the treatment group during the intervention period.

Table 4.17

Final Theme List, Participant Indicator Terms, and Frequency Counts for Occupational Stressors Experienced During the Intervention Period

Theme (<i>n</i> , %)	Participant Indicator Terms
Managing students (<i>n</i> = 40, 44.44%)	Undesirable student behavior, supporting students with special needs
Major events (<i>n</i> = 38, 42.22%)	Concerts, unhappy with how a performance went, busy because of concert or field trip
Interpersonal conflict (<i>n</i> = 13, 14.44%)	Interpersonal conflict with a colleague, interpersonal conflict with a parent, interpersonal conflict with an administrator
Scheduling issues (<i>n</i> = 9, 10.00%)	Concerns about employment, schedule changes or conflicts, being short-staffed, concerns about student recruitment
Illness (<i>n</i> = 7, 7.778%)	Sick, death, ill

Note. *N* = 90. Since one response can contain multiple themes, percentages will not necessarily total 100%.

Managing students. The most frequently occurring cause of occupational stress during the MTME was managing student behavior. This theme was cited by 44.44% (*n* = 40) of treatment group participants. Words and phrases like (a) “student behavior,” (b) “classroom management,” (c) “challenges supporting a student with special needs,” and (d) “challenging class” helped to generate this theme. One participant wrote, “My fourth graders have been a **challenging group** since I first

started teaching them in 1st grade. **Their behavior can be disrespectful**, and it gets to be very frustrating that we cannot get things accomplished because of their attitudes. At the beginning of this training was their grade level performance and the students had terrible rehearsals (lack of effort, blatant disrespect to teachers) and one group even continued the **undesired behavior** at their performance.”

Major events. Next, participants cited major events such as concerts and all of the stress and work that often accompanies them as the second-most common source of occupational stress during the MTME. This theme was cited by 42.22% ($n = 38$) of treatment group participants. Words and phrases like (a) “concerts,” (b) “performances,” and (c) “big events” helped to generate this theme. One participant wrote about the increased workload that comes with attending festival/assessment. They wrote, “I took my middle school choirs to **district festival assessment**. It was stressful to coordinate the day with missed academic classes, creating plans for my own sub to teach while I was out with students, coordinating the transportation to the festival, arranging for chaperones, and ultimately traveling with the students and leading multiple choirs through warm-ups, **performance**, and **sight-reading adjudication**.”

Interpersonal conflict. Thirteen participants (14.44%) cited increased occupational stress from conflicts with colleagues, parents, or administrators. One participant wrote, “I was not told about a performance my administration expected of my Wind Ensemble in a week. I told them I didn't know about it and was told that I was informed in an email a couple weeks before. I did not get an email. I was upset

about the **miscommunication**, and the **condescending remarks from my principal**.”

Scheduling issues. Like interpersonal conflict, 10.00% of treatment group participants ($n = 9$) attributed their increased occupational stress to issues with schedule changes or being short-staffed. One participant wrote about potential future issues with scheduling: “The high school is considering going to block scheduling next year which would cut deeply into my program.” Another participant wrote about recurring mid-year scheduling changes and the lack of communication surrounding them: “The **schedule changed** at my school last week. I got a **few new classes** and **lost some others**. It is really stressful for me because my administrators do not communicate with the staff well, so I usually **do not know my schedule** until I walk into the school building for the first week or two of the new **schedule**.”

Illness. Seven participants (7.78%) used words like “sick,” “illness,” or “death” to describe a stressful event. Some participants mentioned that illness or death made stressful situations even more difficult. When describing why an already-stressful situation hit them particularly hard, one participant wrote, “To put in context why this event just hit me so hard, it's on top of preparing for a music program in two weeks and **my mom's chemo stopped working** so I live in dread that I will receive a call any day after school that the doctor has recommended hospice.” In addition to referencing family illness as a stressful event, one participant wrote about the unexpected death of a young colleague: “Right at the beginning of the study, one of our **younger teachers suddenly died**. This was very shocking and sad for everyone at school.”

Responses to Occupational Stress During the MTME

Next, I asked the 90 treatment group participants who provided complete data to briefly describe their response to the stressful event that they encountered in their role as a music teacher in the past four weeks. This question allowed me to examine how participants responded to occupational stress that they experienced during the intervention period. Six themes emerged from participants' descriptions of their responses to occupational stress during the MTME. See Table 4.18 for a breakdown of the themes, participant indicator terms that generated the themes, and frequency counts of the responses to occupational stress that treatment group participants reported during the intervention period.

Table 4.18

*Final Theme List, Participant Indicator Terms, and Frequency Counts for**Responses to Stressors During the Intervention Period*

Theme (<i>n</i> , %)	Participant Indicator Terms
Emotion-focused coping (<i>n</i> = 42, 46.67%)	Meditated, breathed, prayed, remained present, let it go, acknowledged that I was upset, took a mental health day
Problem-focused coping (<i>n</i> = 31, 34.44%)	Addressed the issue directly, made lists to help develop solution to problem
Stressful response (<i>n</i> = 21, 23.33%)	Got upset or stressed, let it bug me the rest of the day
Helped others (<i>n</i> = 18, 20.00%)	Empathized with the other person, calmed the student down, showed compassion to the person, spoke positively to the student
Utilized support system (<i>n</i> = 6, 6.67%)	Leaned on friends or family for support, delegated tasks to others
Focused on the positive (<i>n</i> = 5, 5.56%)	Enjoyed the day regardless of what happened, saw the good in the situation, reassured myself or others, used humor to diffuse the tension

Note. *N* = 90. Since one response can contain multiple themes, percentages will not necessarily total 100%.

Emotion-focused coping. The most common theme to emerge from 46.67% (*n* = 42) of participants' descriptions of their responses to occupational stress during the intervention period was emotion-focused coping strategies. As mentioned in the Theoretical Frameworks in Chapter 1, emotion-focused coping strategies are most useful when an individual believes that they are unable to directly address a stressful situation. Emotion-focused coping includes mindfulness-based strategies such as mindful awareness and non-reactivity because they can lessen the negative impact of the unalterable stressor on the individual's well-being. Emotion-focused coping

strategies like (a) “breathing,” (b) “meditating,” (c) “praying,” (d) “remaining present,” (e) “letting it go,” (f) “acknowledging that I was upset,” and (g) “taking a mental health day” helped to generate to this theme. One participant wrote, “I was able to **breathe** through the inevitable stress of these situations and recognize that although it would be chaotic and stressful, it was also in my/our power to **be flexible** and **to make the best** of whatever our situation ended up being.” Another participant utilized some of the strategies from the MTME to help diffuse a stressful classroom environment. This participant wrote, “I decided to start all my classes this week with a short **focused-breath meditation**. Even though we were getting started 10 minutes late, I still had the students do this. I told them we were going to **press a ‘reset button’** and then talked them through a **breath mindful meditation**.”

Problem-focused coping. The second-most common response to occupational stress, problem-focused coping, was cited by 34.44% ($n = 31$) of treatment group participants. Words such as (a) “addressed,” (b) “solved,” (c) “responded,” and (d) “corrected” helped to generate this theme. Like emotion-focused coping, problem-focused coping was described in the Theoretical Frameworks section in Chapter 1. Problem-focused coping strategies are best utilized when the individual believes that they can successfully resolve the stressful situation in some way. For example, one teacher directly addressed an issue by “breaking the larger project up into manageable/achievable goals, assigning due dates for each task, taking time to recognize my fears and concerns that were leading to delayed work, and **tackling each task head-on**.”

Stressful response. Twenty-one participants, or 23.33% of the treatment group reported that they responded to a stressful event by getting (a) “upset,” (b) “anxious,” (c) “stressed out,” or (d) letting the event “bug them for days.” One participant mentioned that they “felt less emotionally available to their students **because of their stress,**” while another wrote that they felt “**burned out,** and eventually felt my body **react to the stress.**”

Helped others. Eighteen participants, or 20% of the treatment group responded to their stressful situation by (a) “trying to empathize with the other person,” (b) “calming the other person down,” (c) “demonstrating compassion,” or (d) “speaking positively” in the face of stress. One teacher described helping a student: “I took the student back in the school and even though he was screaming at me, **I calmly told him that I cared about him** and tried to deescalate the problem.” When a student told their parents that one participant was to blame for a negative experience, this participant responded with compassion by “writing the parent an email **showing empathy for the child and their parents.**”

Utilized support system. Six participants, or 6.67% of the treatment group reported that they “leaned on family and friends” or “delegated” as a response to occupational stress. One participant who turned to their spouse for support wrote, “**I leaned heavily** (as I often do) on my amazing husband to help keep my kids and my friend’s child safe and well cared for. He made meals for us and **was understanding and flexible.**” Another wrote that they were upset, and subsequently “**vented** to their fine arts colleagues,” who understood the situation.

Focused on the positive. Five participants, or 5.56% of the treatment group (a) “tried to enjoy the day” in spite of increased stress, (b) worked to “see the good in the situation,” (c) “reassured” themselves and those around them that things would improve, and (d) “used humor” to lighten the mood. One teacher did not react to a student acting out as they felt the student expected them to. Instead, they “diffused the situation by **making a joke**.” They felt that even though the joke was not that funny, it “completed **vented the tension**” and got the class back on task. Another participant reported that instead of potentially making their students feel embarrassed by disciplining them in front of the other students, they “pulled them aside after class and **spoke positively to them**, saying that we would have a better day.”

MTME as a Factor in Teachers’ Responses

Finally, I asked the 90 treatment group participants who provided complete data to indicate if they felt that their mindfulness training influenced their response to the stressful event that they encountered in their role as a music teacher. This question allowed me to determine if participants felt that the MTME was a factor in their response to occupational stress during the treatment period. Forty-One participants, or 45.55% of the treatment group, reported that they felt that the MTME influenced their response to the aforementioned occupational stressor, while 54.44% ($n = 49$) of treatment group participants did not feel that the MTME influenced their response.

Research Question 5: Feasibility

I asked participants a series of yes/no and open-ended questions to determine if there were any aspects of MTME that K-12 music educators felt

were feasible to undertake for the purpose of managing their responses to occupational stress and burnout. Data to answer this research question were provided by participants who were in the treatment group and provided complete data ($n = 90$). When asked if they would recommend MTME to a fellow music educator for the purpose of reducing responses to occupational stress and burnout, 95.55% of participants ($n = 86$) indicated that they would, while 4.44% ($n = 4$) would not. When asked if they found MTME to be feasible while working as a music teacher, 85.55% ($n = 77$) indicated that they did, while 14.44% ($n = 13$) did not.

Feasible: Characteristics

Next, I asked the 77 participants who found the MTME to be feasible while working as a music teacher to list the characteristics that they felt contributed to its feasibility. Ultimately, five broad themes emerged from participants' list of characteristics that made the training feasible for them. See Table 4.19 for a breakdown of the themes, participant indicator terms that generated the themes, and frequency counts of the characteristics that treatment group participants felt contributed to the MTME's feasibility.

Table 4.19

*Final Theme List, Participant Indicator Terms, and Frequency Counts for**Characteristics that Contributed to Feasibility*

Theme (<i>n</i> , %)	Codes
Didn't add stress (<i>n</i> = 35, 45.45%)	Calming, brief, no homework
"On their own time" (<i>n</i> = 24, 31.17%)	Easy to do on my own time, at my own pace
Relevant (<i>n</i> = 20, 25.97%)	Interesting, teacher-specific, music-specific, can practice it while I teach, tangible things I could do, variety of activities
Structured (<i>n</i> = 11, 14.29%)	Provided accountability, well-organized, as a teacher appreciated knowing the "why," progressively more difficult
Accessible (<i>n</i> = 10, 12.99%)	Easy to access via the Canvas app, easy to access in general

Note. *N* = 77. Since one response can contain multiple themes, percentages will not necessarily total 100%.

Did not add stress. The most frequently occurring characteristic that participants reported as making the MTME feasible was that it did not add stress to their lives. This theme was cited by 45.45% (*n* = 35) of treatment group participants who felt that the MTME was feasible to utilize while working as a music teacher. Some participants reported that the training was something that they looked forward to because it was enjoyable and/or did not create additional stress for them. Words and phrases like (a) "calming," (b) "enjoyable," (c) "brief," and (d) "no homework to submit," helped to generate this theme. One participant wrote, "The work was **relaxing and calming!** I enjoyed getting home, walking the dog, making dinner, talking to my

husband, and sitting down do participate in the study. The time was also **easily incorporated** into my busy schedule.” Another participant appreciated the brevity of the activities: “Most of the modules were **short enough** to do **during my prep or lunch time** at school.”

“On their own time”. The second-most frequently occurring characteristic that participants reported as making the MTME feasible was that it could be completed “on their own time,” so that participants could learn the same material at different times. This theme was cited by 31.17% ($n = 24$) of treatment group participants who felt that the MTME was feasible to utilize while working as a music teacher. Words and phrases that helped to generate this theme included “on my own time,” and “at my own pace.” One participant wrote that it was a “do **at your own pace** kind of a course,” while another found that they “could do the training **whenever it was convenient for me.**”

Relevant. The third-most frequently occurring characteristic that participants reported as making the MTME feasible was that it was relevant to their work as music teachers. This theme was cited by 25.97% ($n = 20$) of treatment group participants who felt that the MTME was feasible to utilize while working as a music teacher. Participant responses that helped to generate this theme included phrases like (a) “teacher-specific,” (b) “music-specific,” (c) “interesting,” and (d) “tangible things to implement in my classroom.” One participant cited the “**application of mindfulness training to [the] music classroom** instead of vague generalities” as a characteristic that

helped to make the training feasible. Another wrote, “Since they were **immediately applicable** to our job (which is SO RARE!!!!) it really made it worth it to take some time out of my work day to listen, read or meditate. It's not that unusual to find resources about mindfulness in general or even articles geared specifically towards teachers, but it was so refreshing to find **materials that were designed for us - music teachers!!**”

Structured. The fourth-most frequently occurring characteristic that participants reported as making the MTME feasible was that it was structured in such a way that allowed them to experience progressively more challenging mindfulness-based activities in an organized manner. This theme was cited by 14.29% ($n = 11$) of treatment group participants who felt that the MTME was feasible to utilize while working as a music teacher. Participants also remarked that the MTME was (a) “structured,” (b) “well-organized,” or (c) “progressively harder,” while others felt it (d) “held them accountable.” One participant wrote, “It was **well-organized** and broken down into **very short ‘chunks’** so that I felt I could pop in and out of Canvas when I had time.. I looked forward to the readings and the meditations. I don't always make enough time for myself but since I had **made a commitment** to do this, I found the time. That is also an interesting little lesson for me.”

Accessible. The least frequently occurring characteristic that participants reported as making the MTME feasible was that it was easily accessible. This theme was cited by 12.99% ($n = 10$) of treatment group participants who felt that the MTME was feasible to utilize while working as a

music teacher. Participants Some participants cited the “app” or that the Canvas site was “easy to access” as characteristics that made MTME feasible. One participant wrote that they enjoyed the “ability to access the site at any time.” Further, I asked participants how they accessed the training. The vast majority ($n = 79$) accessed the MTME with their computer; 37 accessed it via smartphone, and 9 accessed it via tablet. When asked where they accessed the training, 82 reported that they accessed it at home; 54 accessed it at work; and one participant accessed it as a passenger in a car. It should be noted that these frequencies will not add up to the complete sample of 90, as some participants indicated that they accessed the MTME through multiple means and in multiple places.

Not Feasible: Characteristics

Next, I asked the 13 participants who found the MTME to not be feasible while working as a music teacher to list the characteristics that they felt contributed to its lack of feasibility. Ultimately, one broad theme emerged from participants’ list of characteristics that made the training not feasible for them.

Too busy. The only characteristic that participants reported as making the MTME difficult to complete was that they were too busy. This theme was cited by 100% ($n = 13$) of treatment group participants who felt that the MTME was not feasible to utilize while working as a music teacher. The theme of being “too busy” was generated by remarks about the MTME being “too long,” containing “too much to do,” or the participant “not having

enough time.” One participant wrote, “The materials you gave us were fantastic! There were days that I loved having ‘meditate’ on my to-do list, while there were also days when I felt **over-stretched** and **unable to complete the work**. As music teachers, we simply **have too much to do** within the school day.” Another teacher wrote, “I feel like there is **always too much to do**,” and “I don’t do a good job of prioritizing self-care.”

Summary of Findings

1. At pretest, the treatment and waitlist-control groups were equivalent in terms of self-reported responses to occupational stress and burnout.
2. At midpoint, the treatment group reported significantly less frequent responses to occupational stress than the control group.
3. At midpoint, the treatment group reported significantly less frequent responses to burnout than the control group.
4. At posttest, the treatment group reported significantly less frequent responses to occupational stress than the control group. This effect size was considered “medium” ($d = 0.49$).
5. At posttest, the treatment group reported significantly less frequent responses to burnout than the control group. This effect size was considered “medium” ($d = 0.41$).
6. The results of mixed effects regression suggested that treatment group participants reported significantly steeper reductions in responses to occupational stress than participants in the waitlist-control group.

7. The results of mixed effects regression suggested that treatment group participants reported significantly steeper reductions in responses to burnout than participants in the waitlist-control group.
8. Cross-sectional analyses at pretest indicated that young age (30 to 39 & 40 to 49), identifying as female, salary satisfaction, perceived lack of administrative support, and perceived parental support were significant predictors of more frequent responses to occupational stress in this sample of in-service music teachers.
9. Cross-sectional analyses at pretest indicated teaching secondary school, salary satisfaction, perceived lack of administrative support, and perceived parental support were significant predictors of more frequent responses to burnout in this sample of in-service music teachers. Further, for each additional extracurricular hour worked, there was small but significant decrease in frequency of responses to burnout.
10. Participants' motivations for undertaking mindfulness training included interest, stress management, to benefit their students, previous experience, self-care, treatment for physical or mental illness, and to manage burnout.
11. During the intervention period, the treatment group participants experienced a variety of occupational stressors including managing students, major events such as concerts, interpersonal conflict, scheduling issues, and illness.
12. During the intervention period, the treatment group participants responded to one particular occupational stressor in a variety of ways including emotion-

focused coping, problem focuses coping, getting stressed out, helping others, utilizing a support system, and focusing on the positive.

13. Of the treatment group participants, 45.55% reported that the MTME was a factor in how they responded to an occupational stressor.
14. Of the treatment group participants, 95.55% indicated that they would recommend the MTME to a fellow music educator for the purpose of reducing responses to occupational stress and burnout.
15. Of the treatment group participants, 85.55% found the MTME to be feasible while working as a music teacher.
16. The treatment group participants who found the MTME to be feasible while working as a music teacher reported several characteristics that they felt contributed to its feasibility, including that it did not add stress, being able to complete the course at their own pace, its relevance to teaching music, its modular and progressive structure, and its accessibility.
17. The vast majority of treatment group participants accessed the MTME with their computer, while others accessed it via smartphone or tablet.
18. The vast majority of treatment group participants accessed the MTME at home, while others accessed it at work or as a passenger in a car.
19. The treatment group participants who did not find the MTME to be feasible while working as a music teacher reported one primary characteristic that they felt contributed to its lack of feasibility: being too busy.

Chapter 5: Discussion

In Their Own Words

“What makes me tired at times, is all the stress outside the ‘moment-to- moment’ creativity of the rehearsal and performance. Practicing mindfulness meditation gives me a well of patience and energy to draw on when I am feeling overwhelmed or challenged meeting deadlines. When I start to feel ‘burned out’” I know I need to make the time to shut it all off and center. I can't change the work load, but I can change my mental perspective and reaction to it through mindfulness and meditation. I have to ‘practice what I preach’ to my students....in that regard, teaching choral music has saved my life.”

--Nikki, secondary school music teacher, late 50s

Recapitulation

The purpose of this study was to examine the effects of a mindfulness-based intervention (MBI) on K-12 music educators' self-reported responses to occupational stress and burnout. Secondary purposes were (a) to explore the experiences of K-12 music educators who underwent a four-week web-based MBI; and (b) to determine if there were any potential relations between participants' demographic and descriptive data and their pretest levels of self-reported responses to occupational stress and burnout.

To determine the effects of the Mindfulness Training for Music Educators (MTME) on music teachers' self-reported responses to occupational stress and

burnout, I utilized a pretest-posttest control group design (Shadish et al., 2002). To explore the experiences of the K-12 music teachers in the MTME treatment group, I gathered and transformed treatment group participants' self-report data into codes to identify salient themes. Next, I tabulated the frequency of emergent themes from participants' responses to better understand the experiences of the treatment group participants. To determine if there were any potential relations between participants' demographic information and their pretest levels of self-reported responses to occupational stress and burnout, I conducted cross-sectional analyses at pretest.

A total of 444 K-12 music teachers and current National Association for Music Education (NAfME) members fully completed pretest measures of demographic information, self-reported responses to occupational stress, and self-reported responses to burnout. Participants were randomly assigned to either the treatment or the waitlist-control groups. Participants in the treatment group completed the four weeks of asynchronous web-based mindfulness training known as the MTME, a midpoint (Week 2) measurement of self-reported responses to occupational stress and burnout, and a posttest (Week 4) measurement of self-reported responses to occupational stress and burnout. Additionally, treatment group participants were asked to answer additional questions about where and how they accessed the MTME, if they felt it was feasible to utilize while working as a K-12 music teacher, and how they responded to a stressful event during the intervention period. Waitlist-control group participants were asked to complete a midpoint (two-week) measurement of self-reported responses to occupational stress and burnout and a posttest (four-week) measurement of self-reported responses to occupational stress and burnout. Following

the submission of their posttest measurement, waitlist-control group participants were provided access to the MTME. The waitlist-control group's version of the MTME was identical to the treatment group's version, except that I did not ask them to complete any further measures of self-reported responses to occupational stress or burnout.

Although the initial sample was comprised of 444 music teachers, various causes of attrition led to a final sample of 250 participants. With the exception of cross-sectional analyses that could be completed at pretest, all analyses were only conducted with participants who provided complete data throughout the duration of the study.

In this chapter, I will provide an interpretation the results of this study within the context of related research followed by relevant implications in-service music teachers and where appropriate, for preservice music teachers. I will begin with a discussion of the experimental results (e.g., the effects of the MTME on occupational stress and burnout). Then, I will examine relations between demographic and descriptive variables and baseline levels of occupational stress and burnout within the context of previous music education research. I will conclude the discussion and implications section with an exploration of participants' experiences and reports of feasibility. Next, I will highlight limitations of the study. Finally, I will conclude this chapter with recommendations for future research, including the examination of differing interventions, populations, and methods.

Discussion and Implications

In the following section, I summarized and discussed the experimental findings. This included comparing the effect sizes of this study to the effect sizes reported in related research conducted with K-12 teachers. I concluded this subsection with implications for both in-service and preservice teachers.

Treatment Effectiveness

Mean group scores indicated that the treatment group participants reported medium and significant decreases in responses to occupational stress ($d = 0.49$) and burnout ($d = 0.41$) at posttest. The results of mixed effects regression suggested that treatment group participants reported significantly steeper reductions in responses to both occupational stress and burnout than participants in the waitlist-control group. Due to the use of a randomized and controlled pretest-posttest design, it is possible to assert that participation in the MTME was the cause of the mean group differences in self-reported responses to occupational stress and burnout at posttest. This supports the notion that there are specific benefits associated with participating in the MTME, including reductions in occupational stress and burnout.

The medium effect sizes for reductions in occupational stress were fairly consistent with those reported in related literature, albeit slightly smaller than the large effect sizes reported by several studies of face-to-face MBIs (e.g., Beshai et al., 2016; Gold et al., 2010; Jennings et al., 2011; Jennings et al., 2013; Roeser et al., 2013). In comparison to the study of web- or app-based MBIs, the medium effect sizes for occupational stress reduction were slightly larger than the small effects

reported by participants (see Demarzo et al., 2017; Harnett et al., 2010; Hoells et al., 2015; Zeidan et al., 2010).

Since burnout is a more serious condition that is caused by prolonged stress, it is typically less prevalent than occupational stress and more difficult to treat. The results of this study confirmed this trend; pretest reports of responses to occupational stress were much more frequent than pretest reports of responses to burnout. While some research suggests that MBIs can significantly reduce symptoms of burnout, there is little consistency in terms of effect sizes. The medium and significant reductions in burnout found in the present study are smaller than those reported by Flook et al. (2013) and are larger than the small effects reported by Jennings et al. (2013) and Roeser et al. (2013). Contrastingly, Frank et al. (2015) did not detect significant reductions in teacher burnout. Considering the limited and varied nature of these findings, much more research is needed to determine the effects of MBIs on teacher burnout.

The lack of consistency in teacher burnout reduction following MBIs may be because this study is only the fifth of its kind. With such a small sample of studies, it may be that intervention or methodological differences are responsible for the variation in effect sizes (see Emerson et al., 2017). Since the results of related studies suggest that MBIs are consistently efficacious in reducing teacher stress, it may be that the one way to reduce burnout is by preventing it through an earlier intervention for stress reduction. Further research necessary to improve our collective understanding of the effects of MBIs on burnout.

Differences in interventions might also be responsible for inconsistent effect sizes. Some of the interventions referenced in this study provided teacher-specific techniques (e.g., Flook et al., 2013), while others provided generalized mindfulness training that was not teacher-specific (e.g., Gold et al., 2010). Based on limited evidence, it is unclear if adapting MBIs for teachers leads to greater reductions in burnout. Methodologically, there is a need to design research that identifies the pathways through which MBIs lead to reduced stress and burnout (Garland et al., 2011; Holzel et al., 2011; Emerson et al., 2017). Future research should utilize quantitative and qualitative measures to determine which aspects of an MBI influence specific outcomes so that interventions can be tailored to bring about specific change in a group of individuals.

Effect sizes are also susceptible to differences in methodology. As mentioned in Chapter 3, there is a lack of agreement on the best way to calculate effect sizes for multi-level models (see Baguley, 2002; Lorah, 2018). Further, Cohen (1988) himself urged caution when applying labels such as “large” and “small” to effect sizes, as these labels are arbitrary ways to describe differences in unadjusted means. It is also worth noting that I used mixed effects regression to analyze experimental data while other researchers who investigated the effects of an MBI on teacher stress and burnout typically used Analysis of Covariance tests (Jennings et al., 2013; Roeser et al., 2013; Taylor et al., 2016). Taking all of these factors into consideration, it may be that conducting further research simply to confirm preliminary trends in effect size is a moot point. The bottom line is that in this and in other related studies, treatment group participants reported significantly steeper reductions in occupational stress and

burnout than control group participants (Benn et al., 2016; Beshai et al., 2016; Flook et al., 2013; Gold et al., Jennings et al., 2013; Roeser et al., 2013; Taylor et al., 2016).

Within the pretest-posttest design, I also measured self-reported responses to occupational stress and burnout at the two-week, or midpoint mark. Mean group scores at midpoint indicated that the treatment group participants reported significant decreases in responses to occupational stress and burnout at midpoint. Therefore, it is possible to assert that as little as two weeks of participation in the MTME may be associated with significant reductions in responses to occupational stress and burnout. Most of the extant research on the effects of MBIs on teacher occupational stress and burnout did not measure occupational stress and burnout as soon as two weeks into the intervention period, so it was difficult to determine if the medium and significant reductions at midpoint are consistent with previous research.

The results of this study are consistent with the limited previous research that suggests that abbreviated MBIs, which range from as few as three sessions (e.g., Harnett et al., 2010; Zeidan et al., 2010) to anything shorter than the standard eight-week model first utilized in Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990) can result in positive outcomes (Demarzo et al., 2017). However, it is unclear exactly how much exposure to an MBI is needed to result in reductions of occupational stress and burnout. Much more research is needed to determine the differential effects of varying amounts of exposure to an MBI. Regarding desirability, MBSR and other similar MBIs were originally developed for high-income and educated populations with chronic conditions (Amaro, Spear., Vallejo, Conron, & Black, 2014; Cullen, 2011). Although the increasing popularity of MBIs has led to

MBIs being studied in more diverse populations and those without chronic conditions, there have been increasing rates of withdrawal and decreasing rates of compliance (Lyssenko et al., 2015). Due to a lack of research in this area, further research can determine if providing a brief intervention would be both efficacious and desirable for teachers seeking to reduce stress and burnout.

Implications for music education. The results of this study suggest that compared to full-length and face-to-face MBIs for teachers, the MTME produced similar reductions in responses to occupational stress and burnout. Research on brief and asynchronous MBIs suggest that removing barriers such as required meeting times and an in-person residence can make mindfulness training more feasible, affordable, and accessible for the general public (Demarzo et al., 2017). While some music teachers might prefer another approach to occupational stress and burnout management, the results of this study suggest that there are some in-service music teachers who embraced and benefited from access to web-based mindfulness training. As evidenced by the response rate to my recruitment emails, mindfulness training will not necessarily appeal to all music teachers, even when it is being offered at no cost. However, an entire profession does not need to express interest in a service for it to be worthwhile. I suggest that advocacy organizations like NAFME send annual or bi-annual emails to members to inform them of easily accessible, efficacious, and low-cost professional development programs designed to support wellness. While I think that it would be wonderful if school systems were willing to pay for this kind of professional development, I believe that making music teachers aware of available

resources is a feasible and important first step toward cultivating professional wellness.

The substantial initial enrollment in the present study may indicate that like the general public (see Cullen, 2011), music educators are eager to generate and sustain conversations regarding music teacher health and wellness. This is essential not just to combat teacher attrition or to increase instructional effectiveness, but to promote a healthy, happy, and balanced life for those who teach music (see Harrison, 2014). Participants' motivations for participating in this study indicate that while teaching music can be rewarding, its demands can be overwhelming. To help offset some of these challenges, music teacher educators, music supervisors, administrators, and in-service music teachers might consider carving out some time within existing professional development or in-service training to discuss issues pertaining to music teacher health and wellness.

Implications for music teacher education. It should not come as a surprise that in-service music teachers are eager to improve their health and wellness when teacher preparation programs, including music education degree programs rarely teach the skills necessary to manage the physical and mental health issues that can arise from the stress of teaching music (see Roeser, Skinner, Beers, & Jennings, 2012). This is especially problematic since undergraduate music majors are particularly vulnerable to stressors and mental health challenges (Barney Dews & Williams, 1989; Conway, Eros, Pellegrino, & West, 2010; Hildebrandt, Nübling, & Candia, 2012; Spahn, Strukely, & Lehmann, 2004; Teasley & Buchanan, 2016). Hue and Lau (2015) provided several suggestions for teacher education programs

following their study of an MBI for preservice teachers, including (a) informing various stakeholders such as teachers, administrators, policy makers, and teacher educators of the benefits of mindfulness training; and (b) generating and sustaining the conversation on how to utilize mindfulness-based practices to manage the inevitable stress associated with teaching music. While it may not be feasible nor desirable to require additional coursework on health and wellness, music teacher educators should consider creating space to generate and sustain conversations on music teacher health and wellness within student teaching seminars, extant pedagogical coursework, or collegiate professional development presentations (see Hue & Lau, 2015). One example of how to incorporate this kind of mindfulness-based pedagogy into existing coursework is to teach preservice teachers to be more aware of their emotional responses to classroom challenges so that they might be able to intervene when they or their students experience high levels of stress. Music teacher educators might consider helping preservice music teachers to engage in specific reflections that help them to become more aware of their emotional responses and learn to regulate them through mindfulness-based strategies.

Demographic and Descriptive Predictors of Occupational Stress and Burnout

In the following section, I summarized and discussed relations between demographic and descriptive variables and baseline reports of occupational stress and burnout. I compared significant relations with those supported by music education research. Finally, I concluded with implications for in-service teachers. Of the 12 demographic and descriptive variables measured at pretest, five were found to be significant predictors of increased responses occupational stress; four were found to

be significant predictors of increased responses to burnout; and one was found to be a significant predictor of decreased responses to burnout. Cross-sectional analyses at pretest indicated that young age (30 to 49), identifying as female, salary satisfaction, perceived administrative support, and perceived parental support were significant predictors of increased responses to occupational stress in this sample of in-service music teachers, while teaching secondary school, salary satisfaction, perceived administrative support, and perceived parental support were significant predictors of increased responses to burnout in this sample of in-service music teachers. For each additional extracurricular hour worked, there was small but significant decrease in burnout significant predictors of increased responses to occupational stress in this sample of in-service music teachers.

Age. Music teachers in the initial sample who were between 30 and 49 years old reported significantly more frequent responses to occupational stress than participants who were older or younger than those in this range. Regarding burnout, age was not a significant predictor of more frequent responses to burnout. These findings are similar to those from earlier studies on music teacher stress, burnout, and attrition. For instance, Doss (2016) found that music teachers under 50 were at a higher risk for increased stress, while Hancock (2008) found that music teachers under 40 were at an increased risk for attrition. In his discussion, Doss (2016) suggested several reasons that teachers aged 30 through 49 might report more frequent responses to occupational stress, including being more likely to have young children, being in the early stages of long-term relationships, and navigating the stress

of major milestones like purchasing one's first home. However, there is currently a lack of evidence to support this speculation.

In addition to major life events, Doss (2016) suggested that early career stressors such as fear of not gaining tenure, fear of poor public performances, and inappropriate student performance expectations often contribute to increased stress in early-career teachers. It is worth noting that music teachers aged 22-29 in the initial sample did not report any significant increases in responses to occupational stress. This contradicts Doss' (2016) finding that music teachers up through age 29 reported increased occupational stress. However, it is possible that music teachers aged 22 through 29 who were experiencing frequent responses to occupational stress might not feel that they have the time to volunteer for a four-week mindfulness training course, and therefore were not represented in the initial sample.

Gender. Female-identifying music teachers in the initial sample reported significantly more frequent responses to occupational stress than male-identifying music teachers. However, gender was not a significant predictor of responses to burnout. Additionally, the initial sample contained one transgender male and one non-binary participant. Although the one transgender male participant reported much more frequent responses to occupational stress than males, females, or the non-binary participant, that finding was not significant.

There is a lack of consensus on whether gender influences occupational stress, burnout, or attrition in music teachers. While Hancock (2008) found that being female was associated with a higher risk for attrition, Doss (2016) reported only small and non-significant differences between female and male music teachers in terms of

perceived stress. In the present study, over 75% of the initial sample identified as female, which may indicate that gender does play a role in volunteering for a stress reduction program. Additional research is needed (a) to explore the role of gender in music teacher occupational stress; and (b) to uncover the reasons that female music educators would enroll in a stress and burnout reduction intervention study at nearly three times the rate of male music educators.

Race and Hispanic ethnicity. Neither race and Hispanic ethnicity were significant predictors of responses to occupational stress or burnout. I was unable to find any music education research that suggested relations between race and ethnicity and stress, burnout, or attrition. Considering that most music education research studies on stress, burnout, or attrition did not collect data on race or ethnicity, much more research is needed in this area.

Grade level. The results of this study suggested that teaching secondary school was associated with more frequent responses to burnout, but not to occupational stress. These findings somewhat align previous music education research. Doss (2016) found that music teachers who taught exclusively middle or high school reported more stress than those who taught exclusively elementary school, while Hancock (2008) found that secondary school music teachers were at a higher risk for attrition than elementary school music teachers. Although the results of the present study support existing research, more replication is needed to confirm this relationship. Additionally, methodological variation such as qualitative research might help to identify the reasons that teaching secondary school is associated with increased stress, burnout, and risk for attrition.

School type. No significant relations were found between teaching in a public or a private school and responses to occupational stress or burnout. Hancock (2008) found that private school music teachers were at a higher risk for attrition than public school teachers. However, this finding is only tangentially related because stress is not always the cause of attrition.

Time spent in the profession. No significant relations were found between time spent in the profession and responses to occupational stress or burnout. Contrastingly, Hedden (2005) suggests that time spent in the profession is correlated with decreased stress. However, it is worth noting that only an experimental design can determine if time spent in the profession leads to reduced stress, as it is possible that severely stressed music teachers are leaving the profession within their first few years of teaching.

Attrition risk. There were no significant relations between participants who were thinking of leaving the profession at the end of the year and responses to occupational stress and burnout. Attrition risk due to burnout reported was the strongest predictor of frequent responses to burnout and approached significance but did not meet the threshold for statistical significance, likely due to a small sample size. While stress and burnout can lead to attrition, other causes of music teacher attrition include a lack of administrative support (Gardner 2006, 2010; Krueger, 2000), a lack of professional resources (Krueger, 2000), a lack of a strong support network (Krueger, 2000), public apathy for music education (Madsen & Hancock, 2002), concerns about the time commitment required for teaching (Gardner 2006, 2010; Madsen & Hancock, 2002), the desire to stay home with one's family (Gardner,

2006, 2010; Madsen & Hancock, 2002), a preference for musical performance (Madsen & Hancock, 2002), and changing career interests (Gardner 2006, 2010; Madsen & Hancock, 2002). Results of this study indicated that a minority of teachers were at risk for attrition. Although this finding may indicate that this sample of music teachers was generally satisfied enough to remain in their present positions, it may also be that even if music teachers are stressed and burned out, they do not feel that they are in a position to leave their job. Further research is necessary to (a) explore the experiences of participants at risk for attrition enrolled in an MBI; and (b) to determine job satisfaction and stress levels for those not reporting attrition risk.

Extracurricular hours. For each additional extracurricular hour worked per week, there was a very small but significant decrease in responses to burnout, and no significant effects for responses to occupational stress. Hancock (2008) found that increased extracurricular hours were associated with being at risk for attrition in a sample of music teachers, while Doss (2016) and Hamman et al. (1987) reported significant relations between increased workload and occupational stress and burnout in music teachers, respectively. Based on these findings, one might expect increased extracurricular hours to be positively correlated with increased occupational stress or burnout. However, the opposite is the case, as increased extracurricular hours were associated with a small decrease in burnout. It is important to remember that cross-sectional analyses do not determine causation. Therefore, it is possible that teachers who love their job and are not experiencing burnout are more willing to commit to additional extracurricular activities. Either way, more research is needed to clarify the

correlation between extracurricular hours and variables such as occupational stress, burnout, and attrition in music teachers.

Salary Satisfaction. Satisfaction with salary was a significant predictor of both occupational stress and burnout in music teachers. Participants who were only somewhat satisfied or who were not satisfied with their teaching salary reported more occupational stress and burnout than those who were very satisfied with their salary. These results support extant research on the effect of salary satisfaction on teacher attrition. Not only is salary dissatisfaction a significant predictor of attrition in music teachers (Hancock, 2008), it is the most commonly cited source of attrition in the broader population of all K-12 teachers (Borman & Dowling, 2008; Harrell, Leavell, van Tassel, & McKee, 2004; Ondrich, Pas, & Yinger, 2008). In addition to attrition, salary dissatisfaction has myriad unfortunate consequences for music teachers. Those who feel that they are unable to make ends meet with their teaching salary might turn to additional employment opportunities such as teaching private lessons or taking a second job in lieu of spending time with family, maintaining mental and physical health, and getting enough sleep. Regarding the relations between salary satisfaction and music teacher stress, burnout, and attrition, the research is clear: music teachers need to be paid more, or there may be detrimental consequences for the profession.

Perceived administrative support. Participants who perceived only marginal support or no support from their administration reported higher levels of occupational stress and burnout than those who reported strong administrative support. These results align with prior research on the effects of administrative support on teacher attrition. Administrative support is a significant predictor of occupational stress

(Hamman et al., 1987; Gordon, 2000) and attrition (Hancock, 2008) in music teachers as well as the broader population of K-12 teachers (Benmansour, 1998; Borman & Dowling, 2008; Howes & Goodman-Delahunty, 2015; Kyriacou, 2001; Pithers & Soden, 1998; Travers & Cooper, 1996). Like salary satisfaction, a perceived lack of administrative support can have dire consequences for music education. At best, a music teacher who feels unsupported by their administration will remain in their job despite potentially feeling undervalued, disrespected, and unsupported. As the results of the present study indicate, this can lead to increased occupational stress and burnout. At worst, a music teacher who feels unsupported by their administration will leave their position or possibly the profession in search of a job where they feel valued by their supervisor. Prior research supports policy changes that lead to increased funding for arts education and targeted professional development that supports administrators in developing healthy and supportive interpersonal relationships with their music educators.

Perceived parental support. Perceived parental support was the final significant predictor of responses to occupational stress and burnout in music teachers. Participants who reported feeling somewhat supported by their students' parents reported more stress and burnout than participants who felt strongly supported, somewhat supported, or very unsupported. It is interesting that only participants who felt somewhat unsupported reported significantly more frequent responses to occupational stress and burnout. Although perplexing, these results confirm existing research on the effect of perceived parental support on music teacher attrition. Hancock (2008) found that a perceived lack of parental support is a

significant predictor of attrition in music teachers, while Gordon (2000) found that the behaviors and attitudes of parents contribute to increased stress in music teachers. Interestingly, Heston et al. (1996) found that students' parents could be a source of job satisfaction for music teachers. These contrasting results demonstrate the importance of healthy interpersonal relationships with parents when it comes to music teachers' well-being and job satisfaction.

Participants' Experiences

In the following section, I summarized and discussed participants' self-report data about their experiences. I compared their occupational stressors with those represented in the music education literature. Finally, I concluded with implications for in-service teachers.

Motivations for participation. Music teachers enrolled in this study for a variety of reasons, including interest in the topic of mindfulness, stress management, to benefit their students, previous experience, self-care, as treatment for a physical or mental illness, and to manage burnout. Although related research did not collect data regarding participant motivations, these reasons align with the purposes several related studies, including stress and burnout reduction (e.g., Benn et al., 2012; Beshai et al., 2016; Flook et al., 2013; Jennings et al., 2011; Roeser et al., 2013; Taylor et al., 2016), to increase teacher efficacy (e.g., Flook et al., 2013; Jennings et al., 2011; Napoli, 2004), and treatment for a physical illness or mental illness (e.g., depression; Benn et al., 2012; Flook et al., 2013; Gold et al., 2010; Napoli, 2004).

Occupational stressors during the intervention period. During the intervention period, treatment group participants encountered a variety of

occupational stressors including managing student behavior, major performances or events, interpersonal conflict, scheduling issues, and illness. Many of these stressors including classroom management issues (Gordon, 2002; Kyriacou, 2001), the behaviors and attitudes of parents, students (Heston et al., 1996; Kyriacou, 2001), peers, and administrators (Gordon, 2000), rehearsals and performances (Doss, 2016), increased workloads (Doss, 2016; Kyriacou, 2001; Pithers & Soden, 1998; Shaw, 2016), and uncertainty surrounding teaching assignments (Shaw, 2016) are represented in the music education and teacher stress bodies of literature.

Responses to occupational stress. In response to their occupational stressors, treatment group participants acted in a variety of ways. The majority of participants utilized emotion-focused coping strategies such as breathing, meditating, praying, remaining present, and moving on, while the second-most common response to occupational stress was problem-focused coping, which involves directly addressing the issue. As mentioned in Chapter 1, coping strategies can be classified as emotion-focused or problem-focused. Problem-focused coping strategies are utilized when the individual believes that they can successfully alter the stressful situation in some way, such as a teacher deciding that they can alter a student's problematic behavior by speaking with them after class. Emotion-focused coping strategies are typically used when the individual believes that they are unable to alter the stressful situation. For instance, a mindfulness-based strategy such as non-reactivity can lessen the negative impact of the unalterable stressor on the individual's well-being.

Reports of using emotion- and problem-focused strategies were followed by responses of being stressed out, helping others, utilizing a support system, and

focusing on positive aspects of the situation. These results closely mirrored Doss' (2016) findings, which indicated that music teachers utilized time with family, healthy habits like exercises, relaxation, and mindfulness to manage occupational stress.

The frequency of reports of emotion-focused strategies suggests that participants may be facing stressors that are largely unalterable. When dealing with complex problems without a quick or clear solution (e.g., a difficult administrator, scheduling conflicts, limited funds and resources), problem-focused coping is not always the most productive course of action (Folkman & Lazarus, 1990; Lazarus, 1966). Instead, the Transactional Model of Stress and Coping posits that teachers might consider utilizing emotion-focused coping (e.g., mindfulness-based strategies) as these strategies might assist music educators in coping with the unalterable stressors frequently experienced across the profession (Folkman & Lazarus, 1990; Lazarus, 1966). Finally, just over 45% of treatment group participants indicated that they felt the MTME was a factor in their response to the stressful event. This is in line with the results of Taylor et al. (2016), which suggested that following an MBI, teachers responded to occupational stress by using more self-regulatory and problem-solving strategies.

Implications for music education. The results of the present study indicate that emotion-focused coping strategies may be popular, efficacious, and feasible tactics for managing the occupational stress associated with teaching music. While most professional development that seeks to reduce stress in music teachers has value, professional development options like the MTME may help music teachers

cope with situations beyond their control. However, it is important to note that emotion-focused coping is not a replacement for problem-focused coping such as directly addressing problematic behavior and situations in violation of contracts. For instance, stressors such as not being paid for one's work or being on the receiving end of inappropriate comments or actions from another individual should always be immediately and directly addressed (see Varona, 2018). While emotion-focused coping can help music teachers manage their reaction to stressful situations, there is still a need for policy changes that improve workplace conditions for music teachers in America.

Program Feasibility

In the following section, I summarized and discussed participants' self-report data regarding program feasibility. I compared characteristics correlated with reports of feasibility with those represented in the mindfulness literature. Finally, I concluded with implications for in-service teachers.

Satisfaction and feasibility. Overall, treatment group participants reported high levels of satisfaction with the MTME. Over 95% of treatment group participants reported that they would recommend the MTME to a fellow music educator for the purpose of reducing responses to occupational stress and burnout. Regarding program feasibility, over 85% of treatment group participants indicated that they found the MTME to be feasible while working as a music teacher. These results echo strong reports of program satisfaction and feasibility from other teacher-specific MBIs (e.g., Jennings et al., 2013; Roeser et al., 2013). Participants who found the MTME to be feasible while working as a music teacher identified several characteristics that they

felt contributed to its feasibility, including the fact that it did not add stress to their already-busy lives, its asynchronous nature, its relevance to their work as music teachers, its modular and progressively more difficult organization, and its accessibility via web browser and smartphone from a variety of locations. Many of these factors suggested that program feasibility was a result of the online and asynchronous nature of the intervention. While there are no other reports of studies examining web-based MBIs for reducing stress in teachers, the reports of feasibility regarding the MTME provide support for the emerging body of research on web- and app-based MBIs (e.g., Cavanagh et al., 2013; Gluck & Maercker, 2011; Hoells et al., 2015; Mitchell et al. 2010; Parks et al. 2012; Schueller 2010; Schueller and Parks 2012).

Contrastingly, just over 14% of participants found the MTME to not be feasible in while working as a music teacher. These participants identified several characteristics that they felt contributed to the difficulty they experienced participating in the MTME as a music teacher, including that they were too busy to complete the long meditations or that meditating just became another item on their to-do list. While more research is needed to better understand which characteristics make an MBI more or less feasible for busy in-service teachers, only a small percentage of participants in teacher-specific MBIs have reported that the intervention was not feasible or acceptable (e.g., Jennings et al., 2013; Roeser et al., 2013) as was the case in the present study.

Accessibility. Regarding accessibility, the vast majority of participants accessed the MTME with their computer; over 35% of participants accessed it with

their smartphone; and just under 10% accessed it with their tablet. Just over 80% of participants reported accessing the MTME from home; over 50% reported accessing it from work; and one participant accessed it as a passenger in their car. These results add to the developing body of literature that suggests that web- and app-based MBIs are feasible options for increasing wellness *because* they can be accessed anytime and anywhere (e.g., Cavanagh et al., 2013; Gluck & Maercker, 2011; Hoells et al., 2015; Mitchell et al. 2010; Parks et al. 2012; Schueller 2010; Schueller and Parks 2012).

Attrition. An interesting yet unexpected finding was the substantial attrition following enrollment in the study. Just under one-half of the initial sample either withdrew from the study or failed to complete measures of occupational stress and burnout. This is a much higher rate of attrition than reported by researchers who examined face-to-face MBIs for teachers (e.g., Jennings et al., 2013; Roeser et al., 2013), and slightly lower than the rate of attrition reported by researchers who studied an app-based MBI for the general population (Hoells et al., 2015). While there is limited evidence to which I can compare these results, it appears that web- and app-based MBIs suffer from substantially higher rates of attrition than their face-to-face counterparts (see Hoells et al., 2015; Miller, 2012).

There was higher attrition in the treatment group, with more than double the number of music teachers failing to complete all measures or withdrawing from the study as the waitlist-control group. While I was unable to obtain a reason for withdrawing or failing to provide complete data from every participant, the primary reason for withdrawing from the study for those who did provide a reason was because they were too busy. Although it is impossible to know, I suspect that those

who stopped providing data actually failed to respond to my emails for a variety of reasons, including (a) being too busy; (b) the absence of face-to-face interaction; or (c) even a loss of interest. I hypothesize that the lack of face-to-face interaction actually makes it easier for an overwhelmed music teacher to simply stop participating if they become too busy.

The substantially lower rates of attrition in face-to-face MBIs for teachers (e.g., Jennings et al., 2013; Roeser et al., 2013) may indicate that there is a certain degree of accountability to one's cohort when participating in a face-to-face MBI that is absent when participating in a web-based MBI. Notably, dozens of participants submitted their posttest responses after the clearly advertised deadline for posttest completion. I decided to not include these submissions in my analyses to ensure that exposure to the intervention was consistent across all treatment-group participants. Analyses to determine equivalency between those who completed the study and those who did not indicated that teaching secondary school and each additional hour spent on extracurricular commitments was associated with being more likely to drop out of the study or fail to complete midpoint or posttest measurements of responses to occupational stress and burnout. Thus, it may be possible that teaching secondary school comes with additional stressors that make completing an asynchronous professional development course like the MTME more difficult. Although only tangentially related, Hancock (2008) found that secondary school music teachers are at a higher risk for attrition than primary school music teachers, which provides very limited initial support for this hypothesis.

Compliance. Of the participants who provided complete data for the duration of the study, just over 80% spent enough time on the intervention site to meet the threshold for compliance with the intervention. Compliance rates were similar to those reported by Roeser et al. (2013) for a face-to-face teacher-specific MBI. Analyses to determine equivalency between compliers and non-compliers indicated that the two groups were equivalent across all demographic and outcome variables with the exception of school type. Specifically, private school teachers were more less likely to comply with the intervention. While there is not enough prior research to compare these results to existing trends, Hancock (2008) found that teaching music in a private school is associated with an increased risk for attrition, which may suggest that there is some aspect of being a music teacher in a private school that serves as a barrier to completing asynchronous professional development like the MTME. Further research in this area might shed light on factors related to study or professional development attrition for private school music teachers.

Implications for music education. Participants' feedback regarding program feasibility may indicate that it is not enough to offer professional development on cultivating and sustaining health and wellness for music teachers; we must also remove barriers to utilizing this professional development. Barriers to accessing and utilizing professional development programs such as the standard eight-week, face-to-face MBI include (a) proximity to the intervention site; (b) afternoon, evening, and weekend schedules; (c) transportation; (d) extracurricular commitments; and (e) family responsibilities (see Demarzio et al., 2017; Hoells et al., 2015). As the attrition

rate suggested, however, the increased convenience that comes with web-based and asynchronous MBIs may also lead to substantial attrition (see Hoells et al., 2015).

It seems that meditation length was a barrier to compliance for some participants who otherwise enjoyed the MTME and found it to be a relatively feasible professional development option for reducing responses to occupational stress and burnout. Several participants admitted that they were unable to complete any guided audio meditations longer than five minutes. In the MTME, only the first meditation of each weekly module was five minutes or less, with the second and third weekly meditations ranging in duration from 10 to 23 minutes. The following feedback came in the form of a post-study email from one mid-career teacher who found the training to be beneficial and feasible for reducing responses to occupational stress and burnout but was not able to devote more than five minutes to meditating each day.

“This study has been very enlightening! I work in an urban school district where my students (middle school) struggle with behavioral issues. It's really demanding on the teachers (and students). We have a huge turn-over rate with staff because they burn out so quickly! We lose staff in the second month of school because they have a hard time balancing the work load. I've been in my school for 13 years, and there are literally five teachers who have worked in my building/district longer than me. This idea of mindset is also so important to everyone in the school setting. My students are quick to ‘react’ to something either someone says or does (like their body language). The teachers and staff are the same way to the students...we reach our boiling point so early in the day that when the next student touches that last nerve, we

just lose it. Personally, I have found the articles and videos about mindfulness to be very useful. I'll be honest, finding the time to meditate during the day (longer than 5 minutes) is tough, and practically impossible. My school days leaves me with little time to prep and I have three kids at home (one with a learning disability) so even when I leave work, it's tough to find that 'time.'"

This participant's feedback was just one of many requests for an even more abbreviated form of the MTME. This feedback combined with emerging evidence suggests that brief MBIs can result in small positive outcomes (e.g., Demarzo et al., 2017; Harnett et al., 2010; Hoells et al., 2015; Zeidan et al., 2010). To this end, it may be worth examining a version of the MTME comprised of shorter meditations to increase feasibility for in-service music teachers.

Limitations

While the present study utilized a strong experimental design, the most obvious limitation to the generalizability of results was the substantial attrition. Prior research on web- or app-based MBIs suffered from similarly high attrition rates, indicating that this limitation was not unique to this study. One meta-analysis found that face-to-face wellness interventions yielded larger effect sizes than self-administered interventions (Sin & Lyubomirsky, 2009). Although face-to-face classes require more of a time commitment in terms of commuting and reserving a set block of time for each weekly meeting, they also provide the opportunity to be part of a cohort where fellow participants typically know your name and look forward to your weekly presence. It may be beneficial for researchers to examine the impact of

combined self-administered and face-to-face elements such as online MBIs supplemented by a midpoint phone call with a human coach (see Hoells et al., 2015). I hypothesize that this hybrid approach might reduce attrition due to a lack of face-to-face accountability.

Another limitation was that I only able to contact participants through email since I did not collect additional contact information. Almost immediately, some emails to participants bounced back and I had no alternate ways to contact these individuals. Additionally, several participants informed me that they had found my emails, including requests to complete midpoint and posttest measures, in their spam folder. Finally, a few participants informed me that they were having technology-related issues with accessing the Canvas site. In many cases, I was able to assist with technological troubleshooting. In some cases, however, these participants unfortunately stopped responding to emails and failed to complete subsequent measures of responses to occupational stress and burnout. While technology enabled 444 music teachers from nearly every state in the country to participate in an MBI, the web-based and asynchronous nature of this study was also at least partly responsible for the substantial attrition. To that end, a face-to-face or hybrid intervention would allow me to follow up with participants and better assist them in person.

A third limitation is the lack of follow-up measurements of responses to occupational stress and burnout. Exemplary prior research featured three-month and/or a six-month follow-up measurement of outcome variables to determine the lasting effects of the intervention (e.g., Roeser et al., 2013; Taylor et al., 2016). At

present, I have been granted approval by the Institutional Review Board (IRB) to contact treatment group participants for three-month and six-month follow-ups in June and September, respectively. These additional data will strengthen the overall study but are not included in this report.

In order to measure music teachers' responses to occupational stress and burnout, I utilized a web-delivered self-report survey instrument. While the MMTSOB was based off of two widely-used and generally accepted survey instruments (Fimian, 1988; Maslach et al., 1986), it was only able to collect self-report responses to occupational stress and burnout. No observation, biological, or teaching data was collected from participants. In order to better understand the complex relationship between participation in the MTME and music teacher stress and burnout, a variety of methods would need to be employed to obtain complementary data.

Finally, since the sample was comprised of self-selected music teachers seeking stress and burnout reduction, it is impossible to generalize the results of this study to the greater population of music teachers. The results of this study should only be generalized to American music teachers who wish to undergo training to reduce responses occupational stress and burnout.

Recommendations for Future Research

As a reminder, this study was situated within an emerging body of educational research that examined the impact of MBIs on teachers' stress. These MBIs were all at least eight weeks long and took place in face-to-face settings. In addition to this study being the first of its kind to examine a brief (e.g., four-week) and asynchronous

(e.g., web-based) MBI, it was also the first examination of a stress reduction program in the music education literature. In this final section I will provide methodological and topical recommendations to inform future related research.

Methodological Recommendations

Future studies investigating the effects of MBIs on music teachers' stress and burnout should be conducted in face-to-face, web-based, and hybrid settings to determine if there are differences in outcomes or experiences by delivery method (see Hoells et al., 2015; Miller, 2012). Additionally, music education researchers might determine more information regarding the impact of MBIs by conducting trials over various time periods in the school year, including during inherently stressful times such as a concert season. For instance, I intentionally avoided the month of December for both study enrollment and the delivery of the intervention because I knew that this was a particularly busy and stressful month from my own experience as a music teacher. The increases in performances, semester-end activities, assessments, and holiday festivities combined with my personal commitments and stress to create little time to enroll in a study and atypically high stress levels. In order to obtain an unbiased initial snapshot of the feasibility and effectiveness of the MTME, I selected the second half of February and the first half of March as the intervention period. However, future research should examine the feasibility and effectiveness of the MTME as well as other MBIs during time periods that are typically more stressful (e.g., the weeks prior to winter concerns and certain holidays) and less stressful (e.g., summer vacation).

There is a need for future studies that identify feasibly brief and efficacious MBIs for teachers. Several participants remarked that they were unable to complete any guided meditations over five minutes due to a lack of time. Based on extant research that suggests that brief MBIs can still produce desirable benefits (see Demarzo et al., 2017; Harnett et al., 2010; Zeidan et al., 2010), I suspect that lower dosages of mindfulness training can still produce at significant reductions in responses to occupational stress and burnout. What remains to be determined is what dosage of mindfulness training is necessary to produce small and significant reductions in occupational stress and burnout.

While the results of this study suggest that the treatment group participants experienced medium and significant reductions in responses to occupational stress and burnout, the analysis techniques employed in this study did not allow me to identify the profile of participant for which the MTME was most and least efficacious and feasible. Future research should utilize quantitative analysis techniques such as latent profile analysis to determine the profile of teacher for which the MBIs are most and least efficacious in producing the desired outcomes. Additionally, due to the very small sample size of transgender and non-binary participants, it was difficult to determine any potential relations between being transgender or non-binary music teachers and baseline responses to occupational stress and burnout. Researchers may consider purposefully sampling to determine the effects of mindfulness training on groups of individuals who have been understudied or who are particularly vulnerable to stress and mental health issues.

Further, we do not yet fully understand exactly *how* mindfulness works. Researchers are only beginning to identify the pathways through which MBIs influence positive outcomes in individuals (e.g., Roeser et al., 2013; Taylor et al., 2016). Mediation analysis of quantitative, qualitative, and physiological data is needed to identify the specific pathways by which an MBI may reduce occupational stress and burnout. One example of this is to collect quantitative data on coping strategies, emotion regulation, and compassion to determine if these variables mediate the relationship between exposure to mindfulness training and reductions in occupational stress and burnout. Additionally, qualitative and mixed-methods researchers might consider analyzing data from focus groups comprised of stressed out teachers, videotaped teaching observations, and interviews with teachers who underwent mindfulness training through the theoretical frameworks of the Transactional Model of Stress and Coping (Folkman & Lazarus, 1990; Lazarus, 1966), emotion regulation (Gross, 1998), and compassion (Goetz et al., 2010; Neff, 2003) to uncover the pathways through which participants learned to manage their symptoms of occupational stress and burnout.

Finally, it is critical that researchers utilize analysis techniques that account for time-invariant individual characteristics and the potential interaction of group placement and time. (Raudenbush & Bryk, 2002). While some mindfulness researchers have utilized multilevel models, (e.g., Jain, et al., 2007) many others have not. In order to best model the relationships between group assignment, time, and reductions in stress, researchers need to be using the appropriate statistical test. With the use of multilevel models, researchers will need to decide how to best report

effect size in multilevel models given a lack of clear recommendations (see Lorah, 2018). Beyond the study of mindfulness, further methodological research is necessary to determine (a) what effect size metric is most appropriate; (b) how to best report effect size; and (c) when and how to make small corrections to effect size calculation (Baguley, 2008).

Topical Recommendations

A common request from participants was for student-specific mindfulness-based resources. Results of this study indicated that many participants enrolled in the study because they were motivated to incorporate mindfulness-based pedagogies into their teaching. It is worth restating that the MTME was designed for the population of music teachers, not music students. However, according to the Prosocial Classroom Model (Jennings & Greenberg, 2009), interventions that influence teacher social and emotional competence such as MBIs might also positively influence student social and emotional competence. Some participants reported noticing improvements in their students' social and emotional competence as a result of their participation in the MTME, but only experimental research can determine if teacher participation in the MTME also influenced student social and emotional competence. One secondary choir teacher emailed me following completion of the study to share his experience with guiding his students through mindfulness-based activities.

“I’m nearly done with the final module and wanted to thank you again for including me in this study. Last Tuesday was region Large Choir festival. I had the opportunity to incorporate mindfulness meditation in both of my rehearsals that day. Chairs had been cleared away as they always are before

a performance and I invited the students to lie safely and comfortably on the floor. I then talked them through what I could remember of the compassion meditation. The students were very attentive and did as they were able. When we finished not much was said about the activity. We've never done anything like it before. My student teacher observed that their focus and attentiveness was greatly increased in the ensuing rehearsal. A handful of students made a point to mention it afterward. My main hope was to allow them to fully relax and indulge in a little self-care. We had constructive, relaxed and successful rehearsals. Without this course I don't think I'd have had the courage to try this. It is definitely a tool I want to continue to cultivate. We didn't talk about achieving, ratings, competition, but were able to focus as I'd hoped on precision, honesty, emotion and communication. This practice really helped me reach out to my students with compassion. It helped us both prepare with the right priorities in place. Thank you!"

This excerpt illustrates the interest that some participants have expressed in utilizing MBIs in their teaching for the purpose of cultivating desirable student outcomes.

Future research might investigate potential downstream effects of (a) teacher-specific MBIs on music students' outcomes; and (b) preservice teacher-specific MBIs on music students' outcomes (see Roeser et al., 2013). Conversely, subsequent studies might also include the examination of potential upstream effects of student-specific MBIs on music teachers' responses to occupational stress and burnout (see Jennings & Greenberg, 2009). There is a growing body of research on the influence of student-specific MBIs on a variety of desirable outcomes. Music education

researchers might consider tailoring existing MBIs for use with students in the music classroom, as this body of research suggests that student-specific MBIs often result in positive outcomes like academic success (e.g., Costello & Lawler, 2014; Viafora et al., 2015), resilience (e.g., Coholic, 2011; Coholic et al., 2012), and a reduction in the harmful effects of bullying (Zhou et al., 2017).

Overall, there is a need for more research investigating the effectiveness of MBIs in reducing teacher occupational stress and burnout not just with music teachers, but with teachers in a variety of content areas across the career span. While my personal passion for eliminating barriers to providing an efficacious and feasible MBI for stress and burnout reduction to as many in-service music teachers as possible inspired this study, I strongly encourage researchers to conduct similar trials within the broader populations of all preservice teachers, music majors, and in-service teachers, as I hypothesize that based on prior research, the effects will be similar to those reported in this study (e.g., Brown, 2017; Diaz, 2018; Taylor et al., 2016). While teaching music can be incredibly stressful, occupational stress and burnout are not unique to the population of in-service music teachers. Thus, it would be tremendously beneficial to expand our collective understanding of the impact of efficacious and feasible stress and burnout reduction strategies.

Conclusion

Teaching music can be stressful, but it does not need to be overwhelming. The demands of teaching any subject to students of any age are commonly accepted as part of the job. However, I do not believe that this has to be the case. The results of this study suggest that there is nascent promise for the use of the MTME to reduce

stress and burnout in music teachers. How would the conversation surrounding music teaching change if all music teachers were taught the self-regulatory skills required to cope with the stress of teaching? Based on the results of this study and several other related studies, I believe that mindfulness can offer music teachers a way to become more aware of the factors contributing to their workplace climate and overall well-being. With a finely tuned mindful awareness, music teachers might be able to view their challenges with clarity and compassion before taking action.

How would music education change at the student level if all music teachers were provided with access to mindfulness-based professional development? Based on prior research, I believe that mindfulness may allow music teachers to draw upon emotional resources to support student learning and build a positive classroom climate (see Jennings & Greenberg, 2009; Roeser et al., 2013). With teaching empirically shown to be a stressful profession, I wondered how we could help music teachers suffering from high levels of stress and burnout. Do we encourage the young, frustrated music educator to simply stick it out? What do we say to the veteran music educator who loves their job, but still feels overwhelmed by all of their responsibilities? A professional development program like the MTME is the first step in providing an efficacious, feasible, and cost-effective response to decades of unanswered reports music teacher stress and burnout. While much more research is necessary to substantiate these preliminary results, I leave you with these post-intervention reflections from the Ellie and K.J., the participants quoted at the beginning of this study:

“Before I acted, I was able to take a moment, make sure all of the students were okay, and think to ask for help. In the past, I think my response would have been much more scattered. Afterward, I was able to think about what I would have done differently without judgement towards myself. I felt like I could have handled some aspects of the situation better, and in the past I think I would have been much harder on myself.”

--Ellie, primary school music teacher, late 20s

“Lately in stressful moments I have taken a slow breath, watched my feelings of frustration with some distance, seeing that the part of me that observes the frustration is not frustrated. I realized I can accept the students’ unacceptable behavior and make the corrections necessary without getting angry and fighting against the behavior.”

--K.J., secondary school music teacher, late 30s

Appendices

Appendix A: IRB and NafME Approval Documentation

IRB Approval (December 2018)



UNIVERSITY OF
MARYLAND

INSTITUTIONAL REVIEW BOARD

1204 Marie Mount Hall
College Park, MD 20742-5125
TEL: 301.405.4212
FAX: 301.314.1475
irb@umd.edu
www.umresearch.umd.edu/IRB

DATE: December 8, 2018

TO: Dana Varona

FROM: University of Maryland College Park (UMCP) IRB

PROJECT TITLE: [1341706-1] The Effects of Web-Based Mindfulness Training on Music Educators' Reported Occupational Stress and Burnout: A Mixed Methods Investigation

REFERENCE #:

SUBMISSION TYPE: New Project

ACTION: APPROVED

APPROVAL DATE: December 8, 2018

EXPIRATION DATE: December 7, 2019

REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 7, *Waiver of consent, 45CFR46.117(c)(1)*.

Thank you for your submission of New Project materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Prior to submission to the IRB Office, this project received scientific review from the departmental IRB Liaison.

This submission has received Expedited Review based on the applicable federal regulations.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of December 7, 2019.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Unless a consent waiver or alteration has been approved, Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

IRB Amendment (January 2019)



UNIVERSITY OF
MARYLAND
INSTITUTIONAL REVIEW BOARD

1204 Marie Mount Hall
College Park, MD 20742-5125
TEL 301.405.4212
FAX 301.314.1475
irb@umd.edu
www.umresearch.umd.edu/IRB

DATE: January 10, 2019

TO: Dana Varona
FROM: University of Maryland College Park (UMCP) IRB

PROJECT TITLE: [1341706-2] Music Teachers, Stress, Burnout, and Mindfulness: A
Randomized Controlled Trial

REFERENCE #:
SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED
APPROVAL DATE: January 10, 2019
EXPIRATION DATE: December 7, 2019
REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 7

Thank you for your submission of Amendment/Modification materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Prior to submission to the IRB Office, this project received scientific review from the departmental IRB Liaison.

This submission has received Expedited Review based on the applicable federal regulations.

This project has been determined to be a MINIMAL RISK project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of December 7, 2019.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Unless a consent waiver or alteration has been approved, Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

- 1 -

Generated on IRBNet

NAfME Approval (January 2019)

Rob Edwards robe@nafme.org via nafme.onmicrosoft.com
Jan 30, 2019, 9:46 AM
to dvarona@umd.edu, Rebecca

Hi Dana,

This email is regards to your research survey proposal titled: *Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Controlled Trial*. Your submission has been reviewed and approved by the SRME executive committee.

CC'd to this message is Rebecca Poorbaugh, who will be able to assist you with disseminating the survey.

Best,

Rob Edwards

Policy and Content Coordinator | National Association *for* Music Education

703-860-4000 x204 | robe@nafme.org

[Twitter](#) | [Facebook](#) | [Instagram](#)

Appendix B: Correspondence

Recruitment Email

Dear Music Educator,

My name is Dana Arbaugh Varona, and I am a PhD candidate in Music Education at the University of Maryland, College Park. I am writing you because you indicated an interest in teaching K-12 music education on your NAFME membership registration. I am interested in recruiting current K-12 music educators to participate in my dissertation study, which investigates the effects of a four-week web-based mindfulness training program on K-12 music educators' work stress. Below is some brief information about mindfulness. If you are interested in receiving four weeks of free web-based mindfulness training through participation in my study, please read below and complete the brief survey at the end of the email. Should you have any questions, please don't hesitate to email me at dvarona@umd.edu. Thank you, and have a wonderful day!

What is mindfulness?

Mindfulness is "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment.

What is the purpose of Mindfulness Training for Music Educators?

The purpose of this study is to examine the effects of this web-based mindfulness training on K-12 music educators' reported occupational (work) stress.

How might I benefit from Mindfulness Training for Music Educators?

According to research on mindfulness training for K-12 teachers, there is some evidence to suggest that practicing mindfulness training can reduce stress and burnout for teachers.

What does this Mindfulness Training for Music Educators involve?

This is a four-week, web-based mindfulness training program for K-12 music educators. Before you begin the training, at the two-week mark, and at the four-week mark, I will ask you to complete a survey, which should take you more than fifteen minutes.

This mindfulness training includes:

- Three guided mindfulness meditations per week (5 to 25 minutes each)
- Reading up to two brief articles per week
- Watching one to two brief videos per week

- Reading about one simple strategy for implementing mindfulness in your music classroom.
- Optional journaling in your own journal to help process your thoughts, emotions, and experiences.
- Optional participation in Canvas discussion board to share experiences with other group members.

Interested in participating? Please click the link below to sign up for this study!

https://umdsurvey.umd.edu/jfc/form/SV_bJzoCRTfRDugaCF

Most Sincerely,
Dana Arbaugh Varona
dvarona@umd.edu
PhD Candidate, Music Education
University of Maryland, College Park

University of Maryland, College Park Institutional Review Board
IRB Office at 301-405-4212 or irb@umd.edu

Email following Random Assignment – Treatment Group

Dear Participant,

Following random assignment, you have been placed in group 1 (2/18-3/15). This email contains lots of important information, so please read it in full and don't hesitate reach out should you have any questions. Here's what you can expect to do next.

- Please take this survey in the next few days if possible, and definitely before Sunday. This is a pretest measuring your baseline levels of music teacher stress and burnout, and should take less than 5 minutes (I promise!)
- Once you complete this survey, I will send you an email invitation to join the private mindfulness training Canvas site. I will send this email in the next few days, so please watch closely for this, accept the invite, and register for Canvas if necessary.
- Your mindfulness training will take place from roughly 2/18-3/15. I will send you a second identical survey (under 5 minutes) around 3/1 that needs to be completed before the third week of training. Finally, I will send you the final survey (this one takes around 10 minutes) at the end of the training. Following the completion of your training, I will keep the Canvas site live so that you can download or continue to access the resources in the future.

- As long as you have completed the first survey, the first week's activities will go live in Canvas this Sunday. I will email you each Sunday when I release the next week's activities, or when there is a survey to be completed.
- This is a protected, invitation-only Canvas site. This mindfulness training includes optional participation in a group discussion board. Additionally, it may be possible to see who else is in the training group with you. If you are worried about other group members knowing your identity, feel free to use a fake name and/or a throwaway (but functioning) email address. Please email me should you choose to operate on the Canvas site under a pseudonym so I'm still able to track your participation for the purpose of my study.

Group 1 Survey: https://umdsurvey.umd.edu/jfe/form/SV_ebLQsLZFIfI5vTL

While I sincerely hope that every single one of you will find this training beneficial, it is fully within your right to drop out of this study at any time, for any reason. If you wish to do so, please let me know. There are over 100 participants who are on a wait-list to participate, so if you have no intention of attempting the training, please inform me as soon as possible.

Should you have any issues or questions, don't hesitate to reach out to me at dvarona@umd.edu. Thank you, and enjoy your day!

My warmest aloha,
Dana

Email Following Random Assignment – Waitlist-Control Group

Dear Participant,

Following random assignment, you have been placed in group 2 (3/18-4/12). This email contains lots of important information, so please read it in full and don't hesitate reach out should you have any questions. Here's what you can expect to do next.

- Please take this survey in the next few days if possible, and definitely before Sunday. This is a pretest measuring your baseline levels of music teacher stress and burnout, and should take less than 5 minutes (I promise!)
- Once you complete this survey, I will send you an email invitation to join the private mindfulness training Canvas site. I will send this email in the next few days, so please watch closely for this, accept the invite, and register for Canvas if necessary.
- Your mindfulness training will take place from roughly 3/18-4/12. I will send you a second identical survey (under 5 minutes) around 3/1, and a third identical survey at the right before you begin your training. Following the

completion of your training, I will keep the Canvas site live so that you can download or continue to access the resources in the future.

- As long as you have completed all three surveys, the first week's activities will go live in Canvas on Sunday 3/17. I will email you each Sunday when I release the next week's activities, or when there is a survey to be completed.

- This is a protected, invitation-only Canvas site.

This mindfulness training includes optional participation in a group discussion board. Additionally, it may be possible to see who else is in the training group with you. If you are worried about other group members knowing your identity, feel free to use a fake name and/or a throwaway (but functioning) email address. Please email me should you choose to operate on the Canvas site under a pseudonym so I'm still able to track your participation for the purpose of my study.

Group 2 Survey: https://umdsurvey.umd.edu/jfe/form/SV_d7qGD4RAJxVhmOF

While I sincerely hope that every single one of you will find this training beneficial, it is fully within your right to drop out of this study at any time, for any reason. If you wish to do so, please let me know. There are over 100 participants who are on a wait-list to participate, so if you have no intention of attempting the training, please inform me as soon as possible.

Should you have any issues or questions, don't hesitate to reach out to me at dvarona@umd.edu. Thank you, and enjoy your day!

My warmest aloha,
Dana

Week 1 Email – Treatment Group

Dear Music Educator,

Happy Sunday! If you have already completed the pretest, then you should've received an invitation to join our private Canvas page. Please accept this invitation and begin training anytime!

If you have not yet completed the pretest, please do so by completing the survey that I sent on 2/12. Then, I'll add you to the private Canvas site so you can begin your mindfulness training.

The course is organized into four week-long modules. On Sunday of each week, the next module will become available. I will email you each Sunday with a reminder that the new module is available and a mindfulness quote to help kick off your week. The first quote is one that has helped me to be mindful in the most challenging moments:

“Between stimulus and response there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom.” -- Viktor E. Frankl

As an aside, Canvas can have a little bit of a learning curve if you have not used it before. Once you have created a free account, I encourage you to click around the site, as I’ve found that that’s the best way to learn to navigate the system. On the site, you will find each week’s activities, a way to contact me, a little bit of information about me, and an optional discussion board to interact with other participants.

I would love to hear from you! Don’t hesitate to reach out to me at dvarona@umd.edu with any questions or concerns you have at any point throughout or following this study.

All my aloha,
Dana

Week 2 Email – Treatment Group

Dear Music Educator,

Happy Sunday! I hope that you had a wonderful first week in the mindfulness training program. I'm so encouraged by the many posts and emails from such a wonderful group of people!

This is your weekly reminder that the next module has opened up. Additionally, at the end of this week, you will receive a link to complete the midpoint (two-week) survey. Please complete this ASAP, as it will take less than five minutes (it asks you the exact same questions as the pretest, which is how I measure any changes that might be occurring in your reported stress and burnout.)

“Mindfulness is simply being aware of what is happening right now without wishing it were different; enjoying the pleasant without holding on when it changes (which it will); being with the unpleasant without fearing it will always be this way (which it won’t).” -- James Baraz

I would love to hear from you! Don’t hesitate to reach out to me at dvarona@umd.edu with any questions or concerns you have at any point throughout or following this study.

Aloha,
Dana

Midpoint Email – Treatment Group

Dear Group 1 Participants,

As we say in my home of Hawai'i, Happy Aloha Friday!! As soon as you complete the second weekly training module, please take the following survey. It is a carbon copy of the five-minute pretest, so that I can track how your stress and burnout levels have changed (or not changed) as a result of two weeks of training. Please do your best to complete it by Tuesday. However, if you're a little behind, don't worry! Just do the best to catch up that you can without stressing yourself out. :) Thank you so much for volunteering your time! Should you have any questions or concerns, please email me at dvarona@umd.edu.

https://umdsurvey.umd.edu/jfe/form/SV_6xmDrJ2WK9xjKlv

Aloha,
Dana

Midpoint Email – Waitlist-Control Group

Dear Group 2 Participants,

As we say in my home of Hawai'i, Happy Aloha Friday!! As soon as you have five minutes to spare, would you please take the following survey? It is a carbon copy of the five-minute pretest, so that I can track how your stress and burnout levels have changed over the last two weeks. Please do your best to complete it by Tuesday. :) Thank you so much for volunteering your time! Should you have any questions or concerns, please email me at dvarona@umd.edu.

https://umdsurvey.umd.edu/jfe/form/SV_5zgZeJ6FBMsCFbD

Aloha,
Dana

Week 3 Email – Treatment Group

Dear Mindful Music Educator,

Happy Sunday! I hope that you had a wonderful second week in the mindfulness training program. This is your weekly reminder that the next module has opened up. Please complete the midpoint assessment (sent in an email on Friday) before you move onto module 3. Of course, if you're a few days behind, don't fret! Just do your best to catch up as you can. :)

“In this moment, there is plenty of time. In this moment, you are precisely as you should be. In this moment, there is infinite possibility.” ~Victoria Moran

I would love to hear from you! Don't hesitate to reach out to me at dvarona@umd.edu with any questions or concerns you have at any point throughout or following this study.

Aloha,
Dana

Week 4 Email – Treatment Group

Dear Mindfulness Participant

Happy Sunday! I hope that you had a wonderful third week in the mindfulness training program. I'm writing you because the final module is now available on Canvas. Additionally, at the end of this week, you will receive a link to complete the posttest (four-week) survey. Please complete this ASAP, as it will take less than ten minutes. Your timely completion of this survey will allow me to conduct my final analysis of the data that you have graciously provided to determine if mindfulness training is effective in reducing music teacher stress and burnout. Whether you have completed the final module or not, I humbly ask that you complete the survey by Monday, March 18th.

This survey will also provide you with the opportunity to provide me with more information on your experience with the mindfulness training program as well as any feedback you have that might help improve the program in the future.

“If you want others to be happy, practice compassion. If you want to be happy, practice compassion.” -- Dalai Lama

I would love to hear from you! Don't hesitate to reach out to me at dvarona@umd.edu with any questions or concerns you have at any point throughout or following this study.

All my aloha,
Dana

Posttest Email – Treatment Group

Dear Group 1 Participants,

Happy Thursday!! As soon as you complete the fourth and final weekly mindfulness training module, please take the following survey. It is similar to the previous surveys, but also has some additional open-ended questions so that I can better understand your experiences with this training program and make improvements for the future. With the additional questions, it should take about ten minutes. Please do your best to complete it **before Monday**.

However, if you're a little behind, don't worry! In this case, I would rather that you take the survey on time, even if you haven't yet completed the training program. Then, you can continue with the training program at your own pace. I will not be removing the Canvas site, so you should have access indefinitely.

Link to survey: https://umdsurvey.umd.edu/jfe/form/SV_1BxDMUBeQo6pU1f

Thank you so much for volunteering your time! I am so appreciative of your willingness to share your time and energy for the sake of music education research. I hope that this training has been beneficial to you, and would love to continue to hear from you if you have any questions or would like to share any of your experiences.

Should you have any questions or concerns, please email me at dvarona@umd.edu.

Aloha,
Dana

Posttest Email – Waitlist-Control Group

Dear Group 2 Participants,

It is with great joy that I write you with information on how to access your free online mindfulness training course! Please read below for lots of detailed information regarding completing the final survey, course enrollment, and accessing the training via website/app.

Link to survey: https://umdsurvey.umd.edu/jfe/form/SV_3FdtzKR3qNQcxal

- Please take this survey in the next few days if possible, and definitely before Monday. This is the final test your levels of music teacher stress and burnout, and should take less than 5 minutes. **This is the final survey I will ask you to complete!**
- Once you complete this survey, don't close the window! A link to enroll in the private Canvas site will appear, but only once you have completed and

submitted the survey. If you accidentally close this window or have any issues enrolling, please email me and I will be happy to provide you with another link. You will need to sign up for a Canvas account if you do not yet have one.

- Your mindfulness training will take place from roughly 3/18-4/12. However, I will not be asking you to complete any additional surveys. Therefore, there is nothing else that you will be required to complete to keep permanent access to these training resources. Simply utilize these resources at your own pace and please do not worry about timelines. Following the completion of your training, I will keep the Canvas site live so that you can download or continue to access the resources in the future.
- As long as you have completed the final survey (linked below), the first week's activities will go live in Canvas this Sunday. I will email you each Sunday when I release the next week's activities.
- This is a protected, invitation-only Canvas site.
This mindfulness training includes optional participation in a group discussion board. Additionally, it may be possible to see who else is in the training group with you. If you are worried about other group members knowing your identity, feel free to use a fake name and/or a throwaway (but functioning) email address.

Once you have registered for Canvas and enrolled in the course, you may access it either through any web browser or via the Canvas app. Here are some specific instructions:

To access via web browser: canvas.instructure.com

In the Canvas student app:

-select "Find my school"

In the "Find your school or district" box, enter "canvas.instructure.com" until "Free Canvas Accounts" pops up. Select that option, then log in with your email and password.

You can also try searching for "Free Canvas Accounts" in the same school or district box.

Thank you so much for taking the time to read my many emails, follow instructions, complete the surveys, and dedicate your time and energy toward music education research! I hope that this training will be beneficial for you and look forward to hearing from you anytime you have a question, or if you simply want to share something about your experience. You can reach me via email at dvarona@umd.edu. I wish you well as you begin your mindfulness training!

Aloha,
Dana

Appendix C: Intervention Materials

The following are links to and descriptions of each piece of the intervention. These activities are organized by modules on the Canvas site, which will be released one week at a time.

Opening Text:

Welcome to Mindfulness Training for Music Educators!

Below is a brief Q&A to learn more about mindfulness and its role in this study.

What is mindfulness?

Mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment.

Mindfulness meditation generally involves focusing one’s attention on a specific “anchor,” such as one’s breath. After some time, one’s focus will drift away from the specified anchor and rest upon thoughts, emotions, or memories of some sort. When practicing mindfulness meditation, the individual will seek to eventually notice and acknowledge this drift and gently and nonjudgmentally refocus their attention back on the anchor.

In mindfulness meditation, the goal is not to prevent your attention from drifting, but to gently and nonjudgmentally bring your attention back to the anchor each time you become aware that it has drifted. Over time, this increased capacity to bring your attention back can help cultivate a clearer awareness of each moment and reduced reactivity to stress.

What is mindfulness *not*?

Mindfulness is not about achieving a state of relaxation, reducing stress, zoning out, complacency, spirituality, or solving all of life’s problems. While mindful states are often associated with relaxation or stress reduction, these outcomes are not guaranteed. The goal of mindfulness is not to fix an unpleasant situation, but to see things clearly and nonjudgmentally before responding to a challenge. Put another way, mindfulness is not a way to avoid stress, but involves facing it head-on.

Is this a religious practice?

The Center for Mindfulness is [a] secular institution and MBSR (mindfulness-based stress reduction) was developed in a way that is accessible to all people regardless of the religious traditions or beliefs.

What is the purpose of Mindfulness Training for Music Educators?

The purpose of this study is to examine the effects of this web-based mindfulness training on K-12 music educators’ reported occupational (work) stress and burnout.

How might I benefit from Mindfulness Training for Music Educators?

According to research on mindfulness training for K-12 teachers, there is some evidence to suggest that practicing mindfulness training can reduce stress and burnout for teachers.

What does this Mindfulness Training for Music Educators involve?

This is a four-week, web-based mindfulness training program for K-12 music educators. Before you begin the training, at the two-week mark, and at the four-week mark, I will ask you to complete a survey, which should take you more than fifteen minutes. Completing the surveys honestly and on-time is important, as this is how I will be able to determine if and how mindfulness training reduces occupational stress and well-being in K-12 music educators.

This mindfulness training includes:

- Three guided mindfulness meditations per week (5 to 25 minutes each)
- Reading up to two brief articles per week
- Watching one to two brief videos per week
- Reading about one simple strategy for implementing mindfulness in your music classroom.
- Optional journaling in your own journal to help process your thoughts, emotions, and experiences.
- Optional participation in Canvas discussion board to share experiences with other group members.

Ready to get started?

Thank you for your participation, and please don't hesitate to contact me at dvarona@umd.edu with any questions you might have!

Meet the Researcher

Dana Arbaugh Varona is a third-year PhD student in Music Education at the University of Maryland, College Park. Passionate about bringing wellness and stress-reduction strategies to K-12 music educators, Dana's dissertation research investigates the effectiveness of a web-based mindfulness training program in reducing music teachers' work stress and burnout. Prior to undertaking doctoral studies at UMD, Dana taught band, orchestra, general music, and choir to a PreK-8 school in Kailua, Hawai'i, where she immensely enjoyed navigating the intricacies of teaching in a small school. Dana holds Master of Music and Bachelor of Music degrees from Ithaca College. In her spare time, she practices mindfulness and enjoys spending time outdoors with her husband, Chris, and their dog, Tyson. At any point before, during, or after the study, Dana can be reached at dvarona@umd.edu.

Ask a Question!

Have a question about mindfulness? Post it to this discussion.

Know the answer? Feel free to reply to your classmates.

Use the Canvas **Inbox** (far left menu) to send a private message to the instructor.

Group Discussion Board

Feel free to use this space to ask questions to others and share your experiences with this mindfulness training! Additionally, please always feel free to contact me at dvarona@umd.edu with any questions that are better suited for me to answer.

Week 1: An Introduction to Mindfulness and Focused Attention Meditation

Article 1.1: What is Mindfulness?

This very brief article from [Mindfulness: Finding Peace in a Frantic World \(Links to an external site.\)](#)Links to an external site. provides an overview of mindfulness. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

What is Mindfulness?

Mindfulness is a very simple form of meditation that was little known in the West until recently. A typical meditation consists of focusing your full attention on your breath as it flows in and out of your body. Focusing on each breath in this way allows you to observe your thoughts as they arise in your mind and, little by little, to let go of struggling with them. You come to realise that thoughts come and go of their own accord; that you are not your thoughts. You can watch as they appear in your mind, seemingly from thin air, and watch again as they disappear, like a soap bubble bursting. You come to the profound understanding that thoughts and feelings (including negative ones) are transient. They come and they go, and ultimately, you have a choice about whether to act on them or not.

Mindfulness is about observation without criticism; being compassionate with yourself. When unhappiness or stress hover overhead, rather than taking it all personally, you learn to treat them as if they were black clouds in the sky, and to observe them with friendly curiosity as they drift past. In essence, mindfulness allows you to catch negative thought patterns before they tip you into a downward spiral. It begins the process of putting you back in control of your life.

Over time, mindfulness brings about long-term changes in mood and levels of happiness and wellbeing. Scientific studies have shown that mindfulness not only prevents depression, but that it also positively affects the brain patterns underlying day-to-day anxiety, stress, depression and irritability so that when they arise, they dissolve away again more easily. Other studies have shown that regular meditators

see their doctors less often and spend fewer days in hospital. Memory improves, creativity increases and reaction times become faster (see [What can mindfulness do for you? \(Links to an external site.\)](#)[Links to an external site.](#)).

Despite these proven benefits, however, many people are still a little wary when they hear the word ‘meditation’. So before we proceed, it might be helpful to dispel some myths:

- Meditation is not a religion. Mindfulness is simply a method of mental training. Many people who practise meditation are themselves religious, but then again, many atheists and agnostics are keen meditators too.
- You don’t have to sit cross-legged on the floor (like the pictures you may have seen in magazines or on TV), but you can if you want to. Most people who come to our classes sit on chairs to meditate, but you can also practise bringing mindful awareness to whatever you are doing, on buses, trains or while walking to work. You can meditate more or less anywhere.
- Mindfulness practice does not take a lot of time, although some patience and persistence are required. Many people soon find that meditation liberates them from the pressures of time, so they have more of it to spend on other things.
- Meditation is not complicated. Nor is it about ‘success’ or ‘failure’. Even when meditation feels difficult, you’ll have learned something valuable about the workings of the mind and thus have benefited psychologically.
- It will not deaden your mind or prevent you from striving towards important career or lifestyle goals; nor will it trick you into falsely adopting a Pollyanna attitude to life. Meditation is not about accepting the unacceptable. It is about seeing the world with greater clarity so that you can take wiser and more considered action to change those things which need to be changed. Meditation helps cultivate a deep and compassionate awareness that allows you to assess your goals and find the optimum path towards realising your deepest values.

This new book combines mindfulness with cognitive therapy and draws on the highly effective MBCT programme developed by Professor Mark Williams and colleagues at Oxford University and other universities around the world to combat anxiety, stress, exhaustion and depression. It’s been clinically proven to work, but more importantly it also works for those of us who aren’t depressed but who are struggling to keep up with the constant demands of the modern world.

To view the original article, visit: <http://franticworld.com/what-is-mindfulness/>

Meditation 1.1: 5-Minute Focused Attention Breathing Meditation

This initial meditation is a five-minute formal meditation. That means that you should find a quiet space where you can sit quietly for five minutes and follow the guided audio meditation. This is a focused attention meditation that helps you to focus on

your breath. The purpose of this meditation is to help increase your meta-awareness, which includes your ability to notice that your mind has wandered, and to increase dereification, which includes treating thoughts and memories simply as mental events instead of as reality. For example, when you notice that your mind has drifted onto recalling a negative email you received from a parent following yesterday's rehearsal, you are engaging in meta-awareness. When you label that memory as simply a memory instead of becoming upset or fixating on it and return to your breath, that is dereification. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link: https://www.uclahealth.org/marc/mpeg/01_Breathing_Meditation.mp3

Meditation 1.2: 12-Minute Breath Sound Body Meditation

This second meditation is a twelve-minute formal meditation. Like the first meditation, you should find a quiet space where you can listen to the guided audio meditation. This is also a focused attention meditation, but this time the object of your attention includes sound and your body in addition to the breath. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link:

https://www.uclahealth.org/marc/mpeg/02_Breath_Sound_Body_Meditation.mp3

Article 1.2: Can Mindfulness Make Us Better Teachers?

This article from Greater Good Magazine: Science-Based Insights for a Meaningful Life (Links to an external site.)[Links to an external site.](#) provides examples of how a teacher can utilize mindfulness in their classroom. It briefly discusses the role of regulating our emotions and demonstrating compassion for ourselves and others in classroom management and interpersonal relationships. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Can Mindfulness Make Us Better Teachers?

A new study suggests that training teachers in mindfulness not only reduces burnout but also improves their performance in the classroom.

BY VICKI ZAKRZEWSKI (Links to an external site.)[Links to an external site.](#) | OCTOBER 2, 2013

Imagine this: In the middle of a lesson, one of your students deliberately makes an offensive remark that causes the other students to laugh and threatens to derail your lesson. Your fists start to clench and there's a tightening in your chest. Before you know it, you snap angrily in a way that 1) doesn't calm the students down, and 2)

makes you spend the rest of the day, or several days, wondering if you're a terrible teacher. Sound familiar?

This scenario is only one of many that add to a teacher's daily stress level, which, over time, can lead to burnout ([Links to an external site.](#))[Links to an external site.](#)—a major issue for those in the education profession. However, adding to this stress is often an educator's own lack of social-emotional strategies ([Links to an external site.](#))[Links to an external site.](#) for dealing with the stress and emotional intensity of the job, which researchers suggest may diminish his or her effectiveness as a teacher ([Links to an external site.](#))[Links to an external site.](#).

So is there something teachers can do to develop their social-emotional skills, not only to guard against long-term burnout but also to help them deal with stressful events while they're happening? Yes, according to a new study ([Links to an external site.](#))[Links to an external site.](#) conducted by the University of Wisconsin's Center for Investigating Healthy Minds ([Links to an external site.](#))[Links to an external site.](#) (CIHM): the practice of mindfulness.

A decade's worth of research ([Links to an external site.](#))[Links to an external site.](#) has documented the great physical, psychological, and social benefits of practicing mindfulness ([Links to an external site.](#))[Links to an external site.](#), which involves paying careful attention to your thoughts, feelings, and environment. In recent years, schools have embraced mindfulness to help improve students' attention, emotion regulation, and learning. For the most part, the focus has been on students rather than teachers.

A group of the Center's researchers, led by Lisa Flook ([Links to an external site.](#))[Links to an external site.](#), took a different tack: They conducted a small pilot study to test the impact of an eight-week mindfulness course adapted specifically for *teachers*. The study found that those who completed the training enjoyed a myriad of personal benefits, including elevated levels of self-compassion and a decrease in psychological ills such as anxiety, depression, and burnout. In comparison, a group of teachers placed on a wait list for the course actually increased in their stress and burnout levels.

But what made this study unique is that it also looked at the participants' classroom performance, such as their behavior management skills and their emotional and instructional support of students. What it discovered was this: The practice of mindfulness made them more effective teachers, possibly by buffering them from the impact of stressful experiences as they were happening.

In other words, the study suggests that when teachers practice mindfulness, students' misbehavior and other stressors become like water off a duck's back, allowing them to stay focused on what teachers really want to do: teach.

So how does the practice of mindfulness actually help teachers in and out of the classroom?

To start, the CIHM researchers defined mindfulness specifically for this study as, "Paying attention in the present moment, on purpose, and without judgment." Anyone who has taught knows that paying attention in the present moment is incredibly

difficult because of the thousand demands on a teacher's attention all at once. And judgment is a very easy state-of-mind to slip into when confronted by a misbehaving child—you don't only judge that child but judge yourself for judging him or her.

One of the most basic mindfulness practices involves sitting quietly and bringing one's awareness to thoughts, emotions, bodily sensations, or an external object. Neuroscientists and emotion researchers have found that this kind of practice heightens the activity in the regions of our brain that regulate our attention (Links to an external site.)[Links to an external site.](#), which then carries over into our everyday lives.

For teachers, this means that in the midst of the craziness that is a classroom, we remain aware of what's going on inside our minds and bodies, which can help us rein in our knee-jerk angry reactions to a situation and instead choose a kinder and more compassionate response.

For example, in the scenario I described at the beginning of this article, a teacher skilled in mindfulness would notice his or her clenched fists and tightening in the chest, take them as a sign that he or she was about to hit the roof, and perhaps take a deep breath or two to calm down. Then he or she would be much better prepared to calmly redirect the students' attention to the task-at-hand. Boom, done, just like that. Moment passed, no lingering stress in the body or mind of the teacher, and the lesson continues.

Mindfulness practice is also a way to deliberately cultivate positive qualities such as empathy (Links to an external site.)[Links to an external site.](#) and compassion (Links to an external site.)[Links to an external site.](#). Previous studies have linked mindfulness to increased activity in brain regions associated with these positive emotions (Links to an external site.)[Links to an external site.](#). In its training for teachers, CIHM included activities such as loving-kindness meditation (Links to an external site.)[Links to an external site.](#), which has been found to help promote kindness and compassion (Links to an external site.)[Links to an external site.](#) toward others.

I like to think that teachers are naturally empathic and compassionate toward their students. But often these qualities get lost in the stress of classroom life, and what suffers most is the all-important relationship between the teacher and the student (Links to an external site.)[Links to an external site.](#). By deliberately practicing mindfulness techniques that cultivate kindness toward others, a teacher faced with a misbehaving student might ask the question, "What happened to you?" rather than "What's wrong with you?"—a more compassionate response that strengthens rather than hinders the teacher-student relationship.

Finally, the CIHM researchers found that the mindfulness group's self-compassion (Links to an external site.)[Links to an external site.](#) increased as well—an important component of teacher well-being. Educators have a tendency to beat themselves up over so many things: a failed lesson, saying the wrong thing to a parent, an inability to reach a challenging student, helplessness in the face of a student's tragic home life—the list goes on and on. And we take it all home at night,

leaving us with little psychic space to re-charge for the next day. Over time, our teaching suffers.

Time and again, teachers ask me in workshops and at our [Summer Institute for Educators \(Links to an external site.\)](#) how they can stop thinking about work after they've gone home. My suggestion, based on the research, is to have a personal mindfulness practice coupled with self-compassion. Mindfulness teaches us to “notice” our thoughts or thought patterns without judging them as “good” or “bad,” which helps diminish the emotional charge that keeps these challenging school situations reverberating in our heads. Once we've neutralized that charge, we can choose to take a more compassionate stance toward ourselves, realizing that all teachers face these challenges and that everyone, including yourself, is doing the best they can.

One caveat: The changes rendered through a mindfulness practice do not happen overnight, nor do they last without continuous practice. Although this study showed significant changes in just eight weeks, [Richard Davidson \(Links to an external site.\)](#), one of the study's co-authors and a leading expert on the science of emotions and mindfulness, is quick to point out that mindfulness is like going to the gym: You have to keep practicing to enjoy the benefits.

While the practice of mindfulness is never a “cure-all”, research suggests that it is a powerful foundation upon which teachers can start to build their social-emotional skills—and, in turn, improve their teaching. So while we may never be able to stop that student from making an offensive remark, we can control our reaction—which, in the end, may make the student think twice about doing it again.

Resources for educators who would like to start a mindfulness practice:

- If you would like to try mindfulness in the privacy of your own home, UCLA's [Mindful Awareness Research Center \(Links to an external site.\)](#) (MARC) offers these [free recordings \(Links to an external site.\)](#).
- If you would like to learn mindfulness in a class, there are several programs geared just for educators, including the [Greater Good Science Center's Summer Institute for Educators \(Links to an external site.\)](#), the [Mindful Schools \(Links to an external site.\)](#), the [Garrison Institute's CARE for Teachers \(Links to an external site.\)](#), [PassageWorks' SMART-in-Education \(Links to an external site.\)](#), and [Margaret Cullen's Mindfulness-Based Emotional Balance \(Links to an external site.\)](#).
- If you're unable to attend one of the above teacher-focused programs, there are numerous workshops throughout the U.S and the world teaching [Mindfulness-Based Stress Reduction \(Links to an external site.\)](#) (MBSR), the program, founded by [Jon Kabat-Zinn \(Links to an external site.\)](#) at the University of Massachusetts Medical School, from which the CIHM's training was adapted.

To view the original article, visit:

https://greatergood.berkeley.edu/article/item/can_mindfulness_make_us_better_teachers

Meditation 1.3: 15-Minute Focused Attention Breathing Meditation

The final formal meditation for week 1 is fifteen minutes long. All of the previous information applies. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link:

<https://health.ucsd.edu/specialties/mindfulness/programs/mbsr/Documents/MP3/Awareness-of-Breath.mp3>

Video 1.1: Mindfulness and Emotion Regulation

Mindfulness in education expert Dr. Tish Jennings of the UVA Curry School of Education describes how mindfulness-based approaches can help teachers to be less reactive in the classroom. She goes on to describe why teachers experience high levels of stress and how mindfulness can help to notice and reduce that stress. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link: <https://www.youtube.com/watch?v=xDpEaQEmHQ0>

Music Education Strategy 1.1: Giving Our Full Attention

Giving Our Full Attention

Mindfulness can support music educators in developing trusting and respectful relationships with their students. Successful classroom management relies heavily upon positive teacher-student relationships. One way to develop a respectful relationship with students is to give them your full attention, even for brief periods in rehearsal. For instance, when a student is speaking to you, you can non-verbally communicate respect for them by stopping what you're doing (e.g., writing on the board) and giving them your full attention (like you give to your breath during meditation). This communicates to them that you value who they are and what they have to say. Here, mindfulness is practiced by cultivating an attitude free of judgment, and paying attention to the student's words without attempting to provide feedback or "fix" the problem. Showing that you care about a student by taking the time to listen to them does not necessarily equate to mindfulness. Mindfulness is established by focusing on what the student has to say and remaining nonjudgmental.

If you find yourself thinking about your response or running through your afternoon to-do list, simply notice this (Meta-awareness), and return to what the

student is telling you (dereification). This process of nonjudgmental focused attention is the most important part of this strategy. Like many of these strategies, there will potentially be additional benefits for both the student and the teacher. For the student, one potential benefit might be noticing that a teacher took time out of their day to get to know them better. For the teacher, an additional benefit is getting to know your students better, and as a result, potentially being able to tailor your instruction to meet their social and emotional needs. One middle school band director stated, “I think the most effective strategy is to listen to students about their issues instead of trying to fix them. When I give them my full attention, they seem to open up to me. Some students now tell me about conflicts with family, friends, and academics. This information provides more insight as to why they struggle with school and how I can be more sensitive to their situations.”

Week 2: An Introduction to the Body Scan

Article 2.1: Stress Management Strategies for Teachers

This article from [Morgan County Schools \(Links to an external site.\)](#)Links to an external site. in Tennessee provides several strategies for coping with teacher stress. The original article is a bit lengthy, so I selected a few of the most frequently mentioned strategies for you to read here. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Stress Management

Teaching has long been recognized as one of the five most stressful occupations. It is interesting to note the most stressful jobs frequently involve work with people or require you to hide your emotions. In combining these two, teaching carries a high degree of emotional labor and with that stress.

Researchers report signs of teacher stress include: being tired, frustrated, overwhelmed and irritable and bringing problems home.

A Utah State University survey of recent studies of teacher stress shows that many identified stressors appear consistently and may be subsumed under the general domains of environmental and personality based stressors. Environmental stressors include student discipline and attitude problems, teacher competence, and teacher-administrator relations. Additional stressors include accountability laws, large classes, low salaries, intense pupil dependence, and declining community support. Sources of personality-induced stressors relate to one's self-perception. Negative self-perception, negative life experiences, low morale, and a struggle to maintain personal values and standards in the classroom all take their toll (Goodman, 1980; Schnacke, 1982; Schwanke, 1981).

How much stress is too much?

Because of the widespread damage stress can cause, it's important to know your own limit. But just how much stress is "too much" differs from person to person. Some people roll with the punches, while others crumble at the slightest obstacle or frustration. Some people even seem to thrive on the excitement and challenge of a high-stress lifestyle. Your ability to tolerate stress depends on many factors, including the quality of your relationships, your general outlook on life, your emotional intelligence, and genetics.

Things that influence your stress tolerance level:

- Your support network – A strong network of supportive friends and family members is an enormous buffer against life's stressors. On the flip side, the more lonely and isolated you are, the greater your vulnerability to stress.
- Your sense of control – If you have confidence in yourself and your ability to influence events and persevere through challenges, it's easier to take stress in stride. People who are vulnerable to stress tend to feel like things are out of their control.
- Your attitude and outlook – Stress-hardy people have an optimistic attitude. They tend to embrace challenges, have a strong sense of humor, accept that change is a part of life, and believe in a higher power or purpose.
- Your ability to deal with your emotions – You're extremely vulnerable to stress if you don't know how to calm and soothe yourself when you're feeling sad, angry, or afraid. The ability to bring your emotions into balance helps you bounce back from adversity.
- Your knowledge and preparation – The more you know about a stressful situation, including how long it will last and what to expect, the easier it is to cope. For example, if you go into surgery with a realistic picture of what to expect post-op, a painful recovery will be less traumatic than if you were expecting to bounce back immediately.

Stress Management - Ways to Relieve Stress

The best way to manage your stress is to learn healthy coping strategies. You can start practicing these tips right away. Try one or two until you find a few that work for you. Practice these techniques until they become habits you turn to when you feel stress. You can also use this coping strategies form to see how you respond to stress.

Reducing Stress

Kathryn Lovewell's Ten Top Tips for Reducing Stress

- Don't argue with reality. There is no point complaining and whining if that generates additional stress for you. Remember, if you argue with reality – you'll only lose 100% of the time! A simple example – "I can't believe it's raining again!" Can you change the weather? How harmful are your thoughts, especially if you repeat them again and again. Stop! Shift your focus to healthy, helpful thoughts. This will lift your energy instantly.

- Assess what you can influence and what you cannot. There are certain things you can affect in your teaching life and certain things you cannot. To master the art of keeping cool in school and remaining calm in chaos, identify what you can steer and what is out of your hands. You cannot control whether Jonny wants to listen to you, you cannot control if Sid sets off the fire alarm for a laugh. The only thing you can control is your response. You can not be on top of everything. Don't expect that of yourself.
- Take charge of yourself via your breathing. If you are stressed, you are in a state of red alert. This is usually a recipe for confrontational exchanges, heightened emotional states and poor classroom management. Focus on your breathing to take charge of yourself. Do this before a lesson, during a difficult conversation and after a lesson. Seven slow deep breaths in followed by seven slower, deep breaths out will increase the relaxation response in your body and help you feel stronger instantly.
- Smile. To increase your relaxation response, take a deep breath, exhale and smile. This is my favorite technique. It is simple and no one need ever know you are using it. You can do a cheesy Wallace and Grommit grin or a subtle Mona Lisa smile - either way you will release endorphins that will help restore your sense of wellbeing. Don't stop at one. Keep breathing and smiling. You might find yourself chuckling your way to the staffroom. And you may just brighten someone else's day too when they see your smile.
- Validate your own feelings. Give yourself permission to feel all your feelings. Anger can drive you into action (I find I do the housework twice as fast if I'm cross) and can inspire you to stand up for justice. You are often justified to feel outraged or incensed. You may feel powerless to change it or you may be able to take healthy action. Either way, recognize what shows up, do not stuff it down. However, while you acknowledge your thoughts and feelings, you do not have to buy into them. If you feed them, they can eat you up. Instead, acknowledge and move on.
- Identify your options. One of the biggest causes of stress is the feeling of having no choice - that your back is against the wall, that you feel cornered. Remember, that is only stress talking. You always have choices. They may not be easy choices, but they are choices nonetheless. Be honest and assess what you can do to support yourself in that moment.
- Talk it through. If you are experiencing stress, especially because of bullying, talking about it can alleviate it immediately. Teacher Support Network is a starting point for personal support. Talking about issues can help you regain perspective.
- Eat healthily. Be kind to your body and it will hold you up during these tough times. Drink plenty of water during the day to flush out toxins. Stay on an even keel by eating regularly and healthily and avoiding depressants and stimulants. Comfort foods, alcohol, caffeine and cigarettes will add to the stress on your body while sugar will give you an empty high and a depressing low.
- Go outside. Leave your classroom. Go outside during break times. Get some fresh air! Leave the school grounds. Walk the dog after school. Go for a walk around the park with a friend. The action of walking releases muscle tension while extra

oxygen in the brain generates clearer thoughts. Your circumstances may be awful right now. You may not be able to change your situation, but you can change the way you perceive it and you can be the master of your thoughts and feelings. Be real. Acknowledge your current reality. Maybe keep a journal and release the anxiety or frustration. Acknowledge what is true for you and then choose to take steps towards making healthy change. Serve your heart, listen to your body and remember to breathe.

To view the original article, visit

<https://www.mcsed.net/site/handlers/filedownload.ashx?moduleinstanceid=198&dataid=743&FileName=Stress%20Management.pdf>

Meditation 2.1: 3-Minute Body Scan Meditation

Our first formal meditation this week will be a short body scan. Like last week, you should find a place where you can meditate uninterrupted, in this case for just three minutes. The body scan meditation is a cross between focused attention meditation, in which you focus attention on a specific anchor like the breath, and open monitoring meditation, where you remain in the monitoring state by giving moment-to-moment attention to anything that arises without trying to focus on any one object. This brief meditation will lay the foundation for you to try a longer body scan next time. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link: <https://www.uclahealth.org/marc/mpeg/Body-Scan-Meditation.mp3>

Meditation 2.2: 20-Minute Body Scan Meditation

Our second formal meditation this week will be a longer body scan (20 minutes). Like in the short body scan, you will give moment-to-moment attention to the portion of the body mentioned in the guided audio meditation. The goal is to remain in the monitoring state and not simply latch onto one object, like the breath. This practice should help improve your meta-awareness and your dereification, while increasing your ability to monitor (e.g., not just focus on one object like the breath). If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link:

https://health.ucsd.edu/specialties/mindfulness/programs/mbsr/Documents/MP3/20_Min_Body_Scan3.mp3

Meditation 2.3: 20-Minute Focused Attention Breathscape Meditation

Our final formal meditation for this week is a 20-minute focused attention breathscape meditation led by Mindfulness expert Dr. Jon Kabat-Zinn. We will return to the focused attention exercises of the first week to strengthen our ability to dereify

(e.g., let go of and don't identify with your thoughts) and to practice meta-awareness (e.g., notice when your mind has wandered). In this instance, we want to notice any distractions and nonjudgmentally return our attention to our breath. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

To access the meditation, click the following link, then hit "play" on the third meditation -- the 20-minute breathscape meditation.

Link: <https://www.mindful.org/audio-resources-for-mindfulness-meditation/%2020%20m%20breathscape%20jkz>

Video 2.1: Monkey Business

I don't want to give anything away – just watch this brief video and see what you take away! If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link:

https://www.youtube.com/watch?v=IGQmdoK_ZfY&list=PLbiVpU59JkValOIEIo2Y65mBopHCjKvBo&index=1

Video 2.2: TED Talk -- How to Make Stress Your Friend

In this TED talk with over 17 million views, Psychologist Kelly McGonigal demonstrates why stress might not always be bad for you. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link:

https://www.ted.com/talks/kelly_mcgonigal_how_to_make_stress_your_friend?language=en

Music Education Strategy 2.1: STOP for Music Educators

STOP for Music Educators

The following strategy is my adaptation of STOP for use in the music classroom.

Next time you notice that you're feeling stressed during a rehearsal or music class,

STOP!

S: stop what you're doing when it's appropriate to take a break for a few seconds (e.g., while your students are performing or working in small groups).

T: take a few deep breaths.

O: observe your breath (meta-awareness), let go of your thoughts (dereification), and return to your breath.

P: proceed with what you were doing with improved focus and clarity.

Week 3: An Introduction to Self-Compassion

Article 3.1: Self-Compassion for Teachers

This article from Greater Good: Science-Based Insights for a Meaningful Life ([Links to an external site.](#))[Links to an external site.](#) discusses the roles of self-compassion and mindfulness in preventing teacher burnout. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

How Self-Compassion Can Help Prevent Teacher Burnout

Tips for keeping cool and being kind to yourself, even in the midst of a stressful situation.

BY VICKI ZAKRZEWSKI ([Links to an external site.](#))[Links to an external site.](#) | SEPTEMBER 11, 2012

“You people, I hate your guts!” And so began the school year with Stephen, a student in my 3rd/4th grade classroom whose frequent outbursts usually included more colorful and sometimes more threatening language.

It wasn’t until April that we finally managed to get Stephen the psychological help he had so badly needed for years. By that time, though, my nerves were frayed. Every night, I fretted about what more I could do to help Stephen, and I constantly beat myself up for not being able to establish a classroom where all students felt happy and safe.

Without realizing it, I was on the road to burnout.

Teacher burnout is almost epidemic in this country and is one of the causes of the 17 percent annual attrition rate ([Links to an external site.](#))[Links to an external site.](#)amongst educators. Scientists have found that teachers can burnout from the negative emotions and inefficacy ([Links to an external site.](#))[Links to an external site.](#) they feel around the challenges of managing their students.

Thankfully, science has also found a positive way to deal with these emotions through something called *self-compassion*.

Kristin Neff ([Links to an external site.](#))[Links to an external site.](#), pioneering researcher and author of the book *Self-Compassion*, believes the practice can greatly benefit educators.

“With the burnout issues teachers face, taking care of themselves through work/life balance is important, but it isn’t enough,” says Neff, “Teachers need to give themselves permission to be self-compassionate for the stress they’re under.”

She describes the practice as a way of reining in our inner critic, replacing it with a voice of support, understanding and care.

The potential benefits of self-compassion are huge. Neff has found that people who practice self-compassion experience fewer negative emotions and stay emotionally balanced in difficult situations—both of which, according to a [study \(Links to an external site.\)Links to an external site.](#) on emotional exhaustion among teachers, help prevent teacher burnout.

Neff says that the first component of self-compassion is *self-kindness*, or treating ourselves with the same care we would give a loved one. As teachers, we care for our students every day but often forget about caring for ourselves.

To help, Neff suggests talking to yourself in the same supportive way you would your best friend. So the next time you come home from a rough day in the classroom (one of those that makes you wonder why you ever became a teacher in the first place), instead of berating yourself for every wrong thing you said to your students, try telling yourself something like this (or whatever might feel natural):

I’m so sorry you had a rough day. Even though you may have said some things to students you wish you hadn’t, it’s okay. All teachers do that once in awhile, but the students survive and so will you. I know you care so much about your students and want them to be successful. Teaching is one of the most challenging jobs out there, and you’re doing the best you can.

The second component of self-compassion is *recognizing our common humanity*. In other words, it’s helpful to remember that we’re all in this together and everyone has to deal with the challenges of life.

“When something bad happens, our normal reaction is ‘this should not be happening,’” says Neff. “The recognition that this is the experience of teaching, that this isn’t abnormal, helps soften some of that resistance.”

Neff suggests having forums where teachers can talk with each other and realize that everyone beats themselves up and feels they’re a failure sometimes. “Just knowing you’re not alone can be very freeing,” she says.

The third and final component of self-compassion is *mindfulness* ([Links to an external site.\)Links to an external site.](#), the moment-by-moment awareness of our thoughts and feelings. [Research \(Links to an external site.\)Links to an external site.](#) has suggested that teachers who practice mindfulness are less likely to experience negative emotions and depression and more likely to enjoy a positive state of mind.

By practicing mindfulness during difficult times, Neff says we can “notice” our negative emotions without getting caught up in them, which then allows us to comfort ourselves with compassionate understanding.

Neff has created [exercises \(Links to an external site.\)](#)Links to an external site. to help people practice self-compassion in the quiet of their own home; however, she believes teachers can also benefit from knowing how to practice in the middle of a hectic day in the classroom.

“In the heat of the moment,” says Neff, “self-compassion gives you the calm and clarity you need to get through a tough situation emotionally and do your best—a win-win situation for both teachers and students.”

Here are two of Neff’s “in-the-moment” exercises for teachers:

1. Self-squeeze. Wrap your arms around yourself or fold your arms in a non-obvious way that mirrors a hug. Just as you would hug a friend who’s having a rough day, this physical gesture of self-compassion is an easy way to soothe and comfort yourself.

2. Breathe-in, breathe-out compassion. Based on a Buddhist meditation method, this practice can easily be done when faced with a challenging student or situation. Very simply, you breathe-in compassion for yourself and breathe-out compassion for the other.

Another benefit of practicing self-compassion in the classroom is the potential soothing effect on students. According to Neff, when we give ourselves compassion, our faces will subtly show it—and students can pick up on this change, helping to calm and soothe them as well.

Teaching will always be a hard job. But self-compassion is a great way for teachers to bounce back from challenging students, bad days, or lessons that fall flat—plus it feels good, says Neff.

“One of the most powerful things about compassion,” she says, “is it makes you feel safe and calmer. Instead of just feeling empathy for your students—which is essentially feeling their pain—self-compassion allows you to embrace that pain with loving-kindness, which makes it bearable.”

To view the original article, visit

https://greatergood.berkeley.edu/article/item/self_compassion_for_teachers

Meditation 3.1: 6-Minute Brief Self-Compassion Meditation

Our first formal meditation this week is a brief self-compassion meditation. Like last week, you should find a place where you can meditate uninterrupted, in this case for just six minutes. This brief self-compassion meditation has elements of both focused attention meditation and open monitoring meditation. The goal is to help you extend feelings of compassion toward yourself. This brief meditation will lay the foundation for you to try a longer self-compassion meditation next time. The ultimate goal of

loving-kindness meditations, or compassion meditations, is to help you extend compassion to both yourself and to challenging individuals, such as a difficult student, parent, teacher, or administrator. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link: https://self-compassion.org/wp-content/uploads/2015/12/self-compassion.break_.mp3

Meditation 3.2: 24-Minute Compassionate Body Scan Meditation

Our second formal meditation this week is a longer compassionate body scan meditation. This meditation combines the body scan you learned last week with the brief self-compassion meditation you just learned. Here, the goal is to improve your meta-awareness (e.g., ability to notice mind wandering), your dereification (e.g., ability to let go of and not identify with thoughts), and to extend compassion to yourself. The compassion piece is especially important. While extending compassion to yourself can be difficult at first, it is an important piece of the puzzle of stress and burnout because researchers suspect that being self-compassionate helps you to extend compassion to others and reduces your stress and burnout. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link: <https://self-compassion.org/wp-content/uploads/meditations/bodyscan.MP3>

Article 3.2: RAIN Mindfulness-Based Strategy

This brief article from [Mindful Magazine \(Links to an external site.\)](#)Links to an external site. discusses RAIN, a mindfulness-based strategy that shares some similarities with open monitoring meditation. Practicing RAIN can help strengthen your meta-awareness (e.g., noticing mind wandering), allow stressful thoughts to be there without pushing them away, investigate by moving closer to a stressful thought, and then non-identify (dereification). If you like, feel free to jot a few notes in your journal to keep track of your experiences!

RAIN: A Mindfulness Practice for Welcoming Your Emotions

This four-step practice helps you recognize your emotions so you can respond, not react, to challenging situations.

BY [SHARON SALZBERG \(Links to an external site.\)](#)Links to an external site. | JUNE 6, 2018

Most people who come to meditation are looking for respite from what is sometimes called the “monkey mind”—the perpetual, hyperactive (and often self-destructive) whirl of thoughts and feelings everyone undergoes. But the truth is that meditation

does not eradicate mental and emotional turmoil. Rather, it cultivates the space and gentleness that allow us intimacy with our experiences so that we can relate quite differently to our cascade of emotions and thoughts. That different relationship is where freedom lies.

RAIN is an acronym for a practice specifically geared to ease emotional confusion and suffering. When a negative or thorny feeling comes up, we pause, remember the four steps cued by the letters, and begin to pay attention in a new way.

R — Recognize: It is impossible to deal with an emotion—to be resilient ([Links to an external site.](#))[Links to an external site.](#) in the face of difficulty—unless we acknowledge that we’re experiencing it. So the first step is simply to notice what is coming up. Suppose you’ve had a conversation with a friend that leaves you feeling queasy or agitated. You don’t try to push away or ignore your discomfort. Instead, you look more closely. Oh, you might say to yourself, this feels like anger ([Links to an external site.](#))[Links to an external site.](#). Then this might be followed quickly by another thought: *And I notice I am judging myself for being angry.*

A — Acknowledge: The second step is an extension of the first—you accept the feeling and allow it to be there. Put another way, you give yourself permission to feel it. You remind yourself that you don’t have the power to successfully declare, “I shouldn’t have such hateful feelings about a friend,” or “I’ve got to be less sensitive.” Sometimes I ask students to imagine each thought and emotion as a visitor knocking at the door of their house. The thoughts don’t live there; you can greet them, acknowledge them, and watch them go. Rather than trying to dismiss anger and self-judgment as “bad” or “wrong,” simply rename them as “painful.” This is the entry into self-compassion—you can see your thoughts and emotions arise and create space for them even if they are uncomfortable. You don’t take hold of your anger and fixate on it, nor do you treat it as an enemy to be suppressed. It can simply be.

As we get closer to it, an uncomfortable emotion becomes less opaque and solid. We focus less on labeling the discomfort and more on gaining insight.

I — Investigate: Now you begin to ask questions and explore your emotions ([Links to an external site.](#))[Links to an external site.](#) with a sense of openness and curiosity. This feels quite different from when we are fuelled by obsessiveness or by a desire for answers or blame. When we’re caught up in a reaction ([Links to an external site.](#))[Links to an external site.](#), it’s easy to fixate on the trigger and say to ourselves, “I’m so mad at so-and-so that I’m going to tell everyone what he did and destroy him!” rather than examining the emotion itself. There is so much freedom in allowing ourselves to cultivate curiosity and move closer to a feeling, rather than away from it. We might explore how the feeling manifests itself in our bodies and also look at what the feeling contains. Many strong emotions are actually intricate tapestries woven of various strands. Anger, for example, commonly includes moments of sadness, helplessness, and fear. As we get closer to it, an uncomfortable emotion becomes less opaque and solid. We focus less on labeling the discomfort and more on gaining insight. Again, we do not wallow, nor do we repress. Remember that progress doesn’t

mean that the negative emotions don't come up. It's that instead of feeling hard as steel, they become gauzy, transparent, and available for investigation.

N — Non-identify: In the final step of RAIN, we consciously avoid being defined by (identified with) a particular feeling, even as we may engage with it. Feeling angry with a particular person, in a particular conversation, about a particular situation is very different from telling yourself, "I am an angry person and always will be." You permit yourself to see your own anger, your own fear, your own resentment—whatever is there—and instead of spiraling down into judgment ("I'm such a terrible person"), you make a gentle observation, something like, "Oh. This is a state of suffering." This opens the door to a compassionate relationship with yourself, which is the real foundation of a compassionate relationship with others.

By allowing ourselves this simple recognition, we begin to accept that we will never be able to control our experiences, but that we can transform our relationship to them. This changes everything.

We cannot will what thoughts and feelings arise in us. But we *can* recognize them as they are—sometimes recurring, sometimes frustrating, sometimes filled with fantasy, many times painful, always changing. By allowing ourselves this simple recognition, we begin to accept that we will never be able to control our experiences, but that we can transform our relationship to them. This changes everything.

Excerpted from the book *REAL LOVE* by Sharon Salzberg ([Links to an external site.](#))[Links to an external site.](#). Copyright © 2017 by Sharon Salzberg. Reprinted with permission from Flatiron Books. All rights reserved.

To view the original article, visit <https://www.mindful.org/rain-a-mindfulness-practice-for-welcoming-your-emotions/>

Meditation 3.3: 16-Minute Focused Attention Breath Awareness Meditation

Our final formal meditation this week is a focused attention breath awareness meditation. Like we did in the first two weeks, this meditation is intended to help improve your meta-awareness (e.g., notice when your mind has wandered from your breath) and dereification (e.g., nonjudgmentally and gently bring your attention back to the breath).

If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link:

<https://health.ucsd.edu/specialties/mindfulness/programs/mbsr/Documents/MP3/Awareness-of-Breath.mp3>

Video 3.1: The Three Components of Self-Compassion

In this video, Self-compassion expert Kristin Neff explains the three components of self-compassion and how it can allow us to coping with stress and suffering. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link: <https://www.youtube.com/watch?v=11U0h0DPu7k>

Music Education Strategy 3.1: Mindful Awareness

The following mindfulness-based strategy comes from Dr. Patricia Jennings and was adapted for music educators by me. It can also be found in the December 2018 issue of *Music Educators Journal* (Varona, 2018).

Mindful Awareness

Understanding the dynamics at play in your classroom can lead to improvements in classroom climate. One way to do this is by practicing mindful awareness. Even during the busiest of classes, there are likely a few moments that do not require active teaching. Perhaps you typically check your email as students enter the room, or look at your lesson plan while students practice a challenging rhythm. Instead, take this time to nonjudgmentally observe the activity in the classroom with calmness and curiosity. You might begin to notice things like students beginning to talk to one another when they finish their personal practice. It might be best to intervene, or it might not. If you do choose to act, do so with mindful awareness.[]

Many teachers felt that mindful awareness was the easiest strategy to apply. One teacher found that mindful awareness had a positive impact on their classroom management.

I now find a way to mindfully observe my students. For instance, when I have them create body percussion, I notice who is distracted and give them the benefit of the doubt. In most cases, they are distracted for a reason. For instance, if a student has a knot in their shoelace, I help them untie the knot instead of getting frustrated with them for not creating body percussion. I'm able to be mindfully aware a few times each day without having to think too hard about it. It has really impacted student behavior because my interventions are no longer excessively strict.

A middle school orchestra director found that mindful awareness helped them to sense the mood in their room and act accordingly.

Sometimes when I make a joke, my students lose it. They cheer and laugh too much, which frustrates me. Lately, I've been trying to be mindful in these moments, and now realize that they are laughing because they enjoy me as their teacher. This has been a huge shift in perspective. I no longer get upset, and now give the class a chance to settle on their own. I've learned to appreciate their reaction for what it is and notice what I can do to change it.

Week 4: An Introduction to Compassion for Others and Open Monitoring

Article 4.1: Creating More Compassionate Classrooms

This [Edutopia \(Links to an external site.\)Links to an external site.](#) article by humanities teacher Joshua Block provides strategies for utilizing compassion in the classroom.

If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Creating More Compassionate Classrooms

By [Joshua Block \(Links to an external site.\)Links to an external site.](#)

December 4, 2013

I had been trying to start class for several minutes. Our normal post-weekend check-in had failed. Instead of hearing updates from each other, students were having side conversations about the school dance. Once I regained everyone's attention, two girls walked in late and the whole class stopped to watch as they gave each other a consoling hug before they moved toward their seats.

I was losing patience. This was not the strong start I had envisioned for the first in-class workday of our project. "Who is ready to share the main question for their project?" I asked in an attempt to refocus everyone and manage the energy emanating from 33 frenetic 15- and 16-year-olds.

The number of decisions that teachers have to make in the course of a teaching day, or even during a ten-minute period, is enormous. Like so many other teachers, I feel stretched to my max during a school day, so the thought of setting another goal feels daunting. Yet I wonder if, in the midst of the controlled chaos of classrooms, it is possible to increase compassion.

At Science Leadership Academy, where I teach, we talk of creating a school-wide [Ethic of Care \(Links to an external site.\)Links to an external site.](#) (as described by Nel Noddings). As I continually investigate new ways to help more students find success in their work and confidence in their abilities, I become increasingly convinced that I must develop a stronger ethic of compassion within the daily, overflowing moments of a class period.

What Can Compassion Mean in a Classroom?

A compassionate classroom environment is not an environment that lacks academic rigor. In this environment, students are understood to be complex people. Here, young people feel that they belong. Here, they meet challenge and encouragement while we ask them to be the best versions of themselves. Compassionate classrooms are places where student voices and student ideas are prioritized.

I hope that by identifying and practicing these simple structural and pedagogical reminders, I will be able to steadily improve my ethic of compassion:

1. Remembering to Check In

I get so excited about content and projects that it's easy for me to forget how my students' minds are already busy with thoughts that don't relate to my class (imagine that!) when they arrive in the classroom. I find that small gestures can have a large effect on the energy and mood of a group. Sometimes this means checking in with individual students via short conversations at the door, or starting class by asking everyone how they are and having volunteers share bits of news. It gives us a short transition time together where we first reconnect as individuals and then switch to content.

2. Informal Conferencing

Interacting with students individually and in smaller groups during class shifts the dynamic between teacher and students. I want to remember to regularly spend portions of class time kneeling down next to students at their tables as we consult about their work. Too often I forget the importance and necessity of integrating these check-ins into our class time.

3. Increasing Personal Connections With Content

We all feel more engaged when topics relate to our lives. Some of my units allow students to make powerful connections. An example is a unit on Renaissance art that investigates issues of representation ([Links to an external site.](#))[Links to an external site.](#) and then uses a similar framework to have students analyze modern day advertising. I am planning to find more ways to highlight these overt connections more frequently.

4. Asking Better Questions

Sometimes I will ask a student too general a question about the progress of a project, and their short, clipped affirmative response will end our conversation. At other times I remember to ask specific questions such as:

- What is the main idea you are developing for your conclusion?
- How are you analyzing that source?
- What parts do you feel good about, and what are you struggling with?

When I ask the right questions, my connections with even the most reticent students get stronger.

5. Expressing Belief in Student Abilities

When my students and I are at our best, the work they create is powerful. I have learned that there is incredible value to setting high expectations while expressing confidence that students can succeed with tasks that may feel overwhelming. On a group project, I may remind a class, "This is challenging, but if you are working together and using your time wisely, you will be able to create something impressive."

6. Being Flexible and Accepting Failure When It Happens

When students run into problems that impede their progress, I want to remember to be flexible while maintaining a high standard. When students do not succeed, I want to remember to make it clear to them that while I had hoped for more, everyone messes up. I find that this balance of rigor and understanding is key to students feeling that they *belong* in a class.

Songs of Selves

Caring about young people is a primary reason that adults choose to teach. Sadly, it can be very challenging to find ways of being a caring presence in the midst of jam-packed school days. If, as teachers, we plan strategically to increase compassion in our classrooms, more young people will grow up believing the important words of Walt Whitman in *Song of Myself* ([Links to an external site.](#))[Links to an external site.](#):

"I am large, I contain multitudes."

How have you made *your* classroom a more compassionate place?

To view the original article, visit <https://www.edutopia.org/blog/creating-more-compassionate-classrooms-joshua-block>

Meditation 4.1: 7-Minute Open Monitoring Meditation -- Working With Difficulties

Our first formal meditation of this final week is a brief open monitoring meditation intended to help you work through difficulties. In open monitoring meditation, you remain in the monitoring state by giving moment-to-moment attention to anything that arises without trying to focus on any one object. This practice is intended to strengthen your meta-awareness (e.g., noticing mind wandering) and dereification (e.g., letting go of and not identifying with thoughts), while lessening your object orientation (e.g., being able to focus on more than one object instead of just focusing on your breath).

If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link:

https://www.uclahealth.org/marc/mpeg/04_Meditation_for_Working_with_Difficulties.mp3

Meditation 4.2: 16-Minute Loving-Kindness Meditation

Our second formal meditation of this final week is a 16-minute loving-kindness meditation. This meditation has elements of both focused attention meditation and open monitoring meditation. The goal of this meditation is to help you extend compassion to both yourself and to challenging individuals, such as a difficult student, parent, teacher, or administrator.

If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link:

https://health.ucsd.edu/specialties/mindfulness/programs/mbsr/Documents/MP3/15_Min_Lovingkindness.mp3

Article 4.2: The Oasis Within -- Mindfulness Practice for Teachers

This [Edutopia \(Links to an external site.\)Links to an external site.](#) article by Mindfulness expert Dr. Lisa Flook provides information on how mindfulness can help reduce teacher burnout. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

The Oasis Within: Mindfulness Practice for Teachers

By [Lisa Flook, PhD \(Links to an external site.\)Links to an external site.](#)
January 22, 2014

***Editor's note:** [Simon Goldberg \(Links to an external site.\)Links to an external site.](#), Lisa Flook's colleague at UW-Madison's Center for Investigating Healthy Minds, contributed to this post.*

It's 6:00 AM on a frigid Monday in mid-January. You know the feeling -- the darkness outside, as if you're moving through molasses, slogging through just to get out of bed. Through your morning ritual, you're finally at school. And it's just the beginning of a long, grueling day, in a seemingly endless week, and a never-ending year. You find that you don't have much patience for your students, frustrated with what feels like their commitment to making your life difficult. You feel isolated and alone, unsupported and up against something much bigger than you can handle -- in a phrase, burned out.

If some aspect of this story resonates, you're in good company. Many teachers experience stress and eventual burnout due to demands inherent in educational

settings. But it doesn't have to be that way. Schools are beginning to recognize the importance of nurturing children's social and emotional skills. Likewise, schools have much to gain by caring for and promoting the wellness of their teachers. Recently, our group at the University of Wisconsin had the opportunity to work with a number of teachers who agreed to help us study the effects of a mindfulness training program adapted especially for educators.

An MBSR Moment

Among other benefits, mindfulness is a stress-reduction technique increasingly being used in business, healthcare and education settings, to name a few. Mindfulness entails bringing attention to present-moment experience with an attitude of openness and curiosity while letting go of judgments that may arise. Research evidence suggests significant physical and mental health benefits of practicing mindfulness, from stronger immune function to decreased depression and anxiety.

Research underway on applications of mindfulness in school settings is showing promise for teachers (as well as for students, which is another subject). A handful of studies with educators have found reductions in stress, increased compassion for oneself and others, improved focus and attention, and more effective teaching practices, even after just eight weeks of mindfulness training. Most of these studies employ curricula modeled on Mindfulness Based Stress Reduction (Links to an external site.) (MBSR), one of the most widely disseminated programs for learning mindfulness.

You may be thinking, "MBSR sounds interesting, but what if I don't have time or access to an MBSR class?" Mindfulness practices, although requiring some effort to integrate into one's life, are straightforward and accessible. Here are two practices that you can try out:

(Links to an external site.) Links to an external site. The Dropping In (Links to an external site.) Links to an external site. practice

(Links to an external site.) Links to an external site. The Breath Awareness (Links to an external site.) Links to an external site. practice

Even brief moments like these, practiced a few times a day, can make a difference. Dropping in before class, during breaks, with students at the start of class, when things are getting hectic or before going home for the day may help us relate to the stress in our lives in more healthy ways.

The Power of Acceptance

Research suggests that mindfulness practice offers healing. The power, perhaps, lies in not needing to change one's experience. This may sound counterintuitive at first, as our instinctual reaction compels us to hold onto whatever is pleasant and push away whatever is unpleasant. This is a normal (automatic) response, but it creates

considerable pain given that experience, whether pleasant or unpleasant, is constantly changing.

By simply cultivating the ability to experience the present moment openly, with curiosity and without judgment, mindfulness practice can remove a layer of stress and discomfort from our lives. Going back to our cold, dark January morning from above, sure, many of us may prefer a bright, warm June morning. But an extra layer of (unnecessary) suffering gets piled on the January cold when we think or wish that it should be different from what it is. The weather won't change just because we think it should, so why not save our energy? We also add suffering through worrying and projecting into the future or past. "This weather will interfere with my plan to exercise outside, I won't be able to stick to my resolution to be healthier, I might as well forget about dieting, too. I don't know how I can ever become healthy and happy." And so on.

Mindfulness practice offers an alternative to this habitual resistance we're all too familiar with. We can learn to engage experience directly, even when painful or stressful, or when facing an unwelcome chilly morning. This approach does not eliminate the unpleasant, but can we see experience for what it is without pushing it away? Can we perhaps learn to treat ourselves with compassion when we encounter difficulty?

The first scientific studies of mindfulness, over 30 years ago, applied it for chronic pain. Participants in these groups learned to experience their pain directly, without adding anything on top. Opening themselves up in this way -- exactly the opposite of how they were used to responding -- provided relief. What a paradox!

Life is often tough, and teaching is certainly tough. But this difficulty increases with our resistance to what is here now. Through practice, we can develop greater kindness toward ourselves and increased openness to our experience, to be more fully available for *both* the painful Monday morning and the exhilarating "Aha!" moments of student discovery.

More About Mindfulness

Here are a few resources for learning about mindfulness programs and research:

- [Center for Investigating Healthy Minds at UW-Madison \(Links to an external site.\)](#)[Links to an external site.](#)
- [University of Massachusetts MBSR \(Links to an external site.\)](#)[Links to an external site.](#)
- [UCLA Mindful Awareness Research Center \(Links to an external site.\)](#)[Links to an external site.](#)

To view the original article, visit <https://www.edutopia.org/blog/oasis-within-mindfulness-practice-teachers-lisa-flook>

Meditation 4.3: 23-Minute Open Monitoring Meditation

Our final formal meditation of this training program is a 23-minute open awareness meditation led by Tara Brach. In open monitoring meditation, you remain in the monitoring state by giving moment-to-moment attention to anything that arises without trying to focus on any one object. This practice is intended to strengthen your meta-awareness (e.g., noticing mind wandering) and dereification (e.g., letting go of and not identifying with thoughts), while lessening your object orientation (e.g., being able to focus on more than one object instead of just focusing on your breath). If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link: http://hwcdn.libsyn.com/p/7/7/2/77224d9a8d4d87bc/2012-05-16-Meditation-Open-Awareness-TaraBrach-hq.mp3?c_id=9666265&cs_id=9666265&expiration=1539111374&hwt=beb2f75781f5cd11455ce4dd2f3c219b

Video 4.1: Listening is an Act of Love

This video by Mindfulness expert Dr. Jon Kabat-Zinn illustrates how listening is an act of demonstrating compassion for others. If you like, feel free to jot a few notes in your journal to keep track of your experiences!

Link: <https://www.youtube.com/watch?v=Jfnf708ukZI&list=PL1t8gs-WJprAUMKs-W4CMTh8s5QlApW-&index=6>

Music Education Strategy 4.1: Setting Intention

Setting Intention

A mindfulness practice known as setting intention can help music educators remember why they decided to pursue a teaching career. Every morning, take a couple minutes to remember why you became a music educator. Focusing on your values and motivations will help to direct your behavior. During your day, take ten seconds to nonjudgmentally evaluate whether or not you are on track. Just as it was important in focused attention, it is important to try not to be judgmental or frustrated if you are not realizing your goal. Setting your intention does not mean that you will achieve your goal, rather it means that you are aware of your goal and can make adjustments to help you get closer to meeting it.

One preservice music educator found setting intention to be especially useful in music performance.

I sometimes forget to focus on my values and motivations for making music, and this often makes me fumble and stress out while performing for people. I get immensely caught up in playing the right notes; I overanalyze every movement and end up playing with far less musicality than I do in practicing. Last week in studio, though,

before I began to play, I thought to myself, ‘What a privilege it is to get to make music. The people listening do not care about correct notes. They care about the music behind the notes. You’ve practiced this piece enough times—it’s in your fingers. Now, just enjoy the music.’ When I got up to play, remembering that the reason I play is to make music and not to play correct notes, I had one of my best studio performances ever.

Appendix D: MMTOSB

Start of Block: Default Question Block

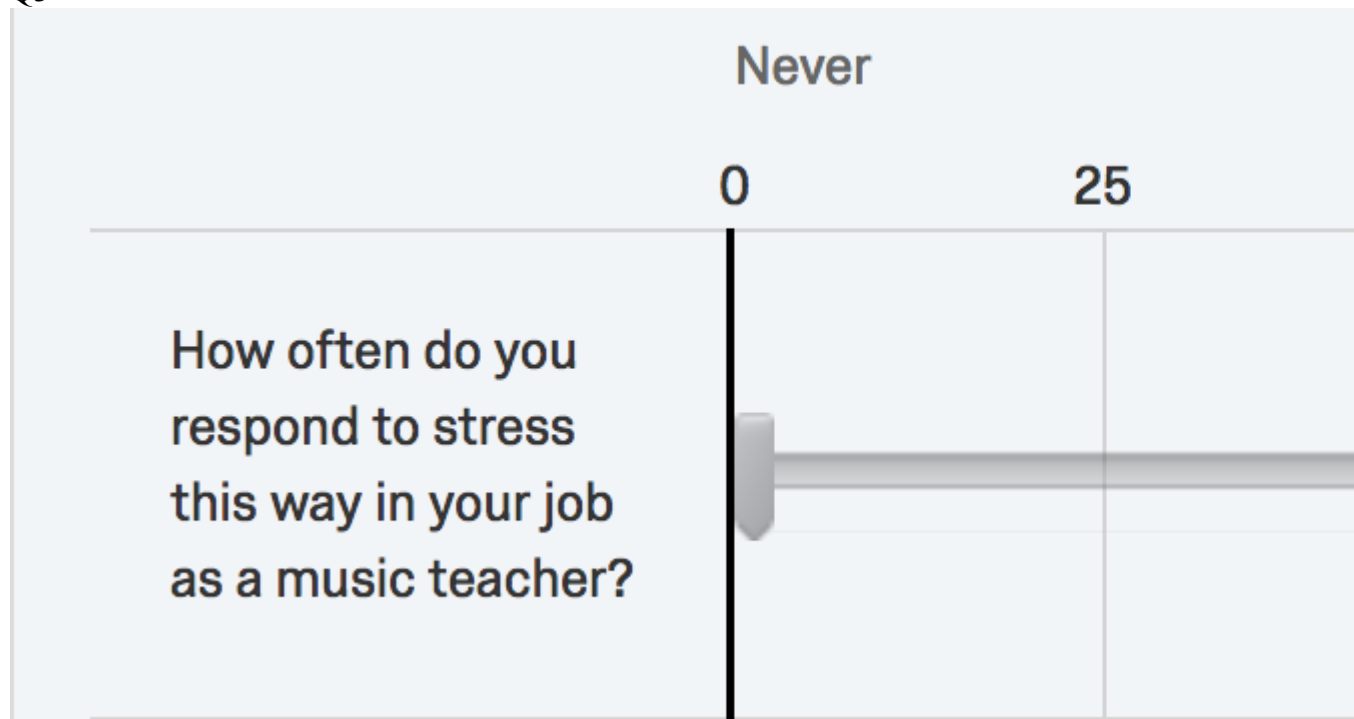
Q28 What is your email address? Be sure to enter the same email address you have been using for the duration of the study, as it's how I'll track your responses.

Q1 Below are 24 statements of job-related feelings and responses. Please read each statement carefully and decide how often you feel or respond to stress in this way **pertaining to your job as a music teacher**. Please review the following example and use the slider below each question to indicate how often you have this feeling or response.

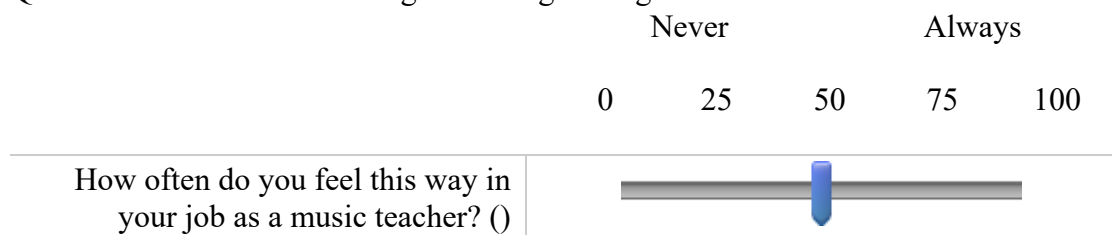
For Example: I respond to stress with a headache.

Use the slider to indicate how often you respond to stress pertaining to your job as a music teacher with a headache. If you never respond with a headache, move the slider as far left as possible, under 0, or never. If you always respond with a headache, move the slider as far right as possible, under 100, or always. If you respond with a headache somewhere in between never and always, indicate how often you respond to stress with a headache by moving the slider to the appropriate location.

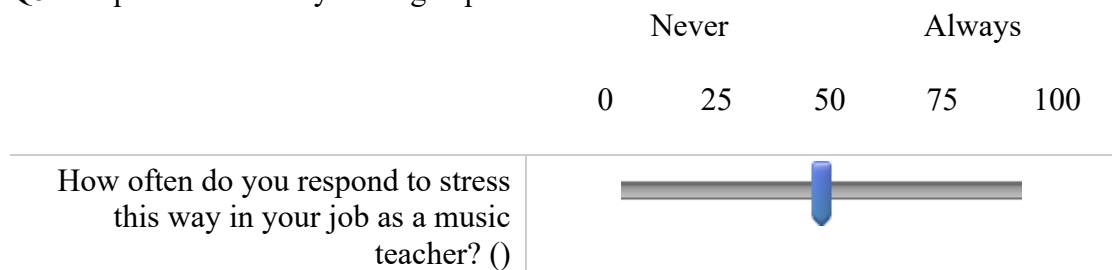
Q3

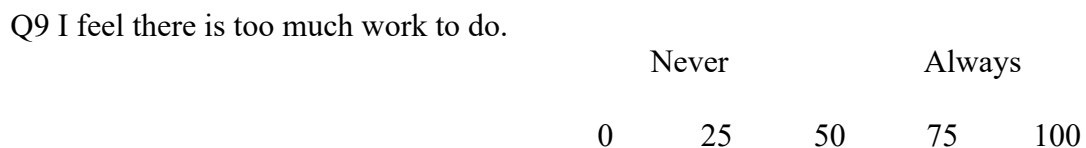
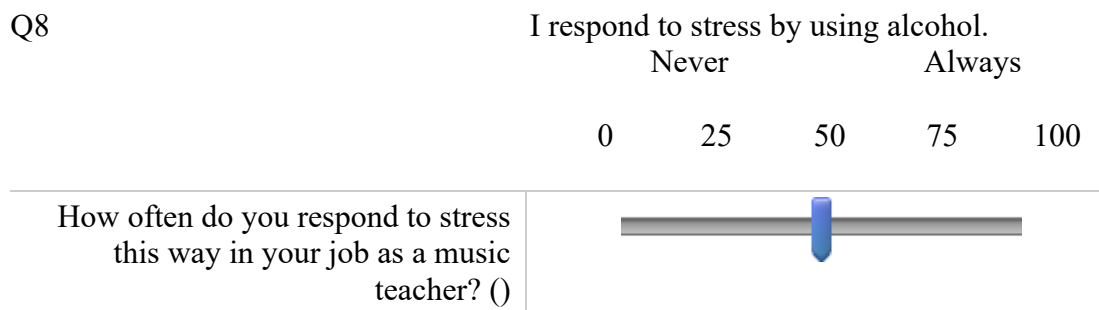
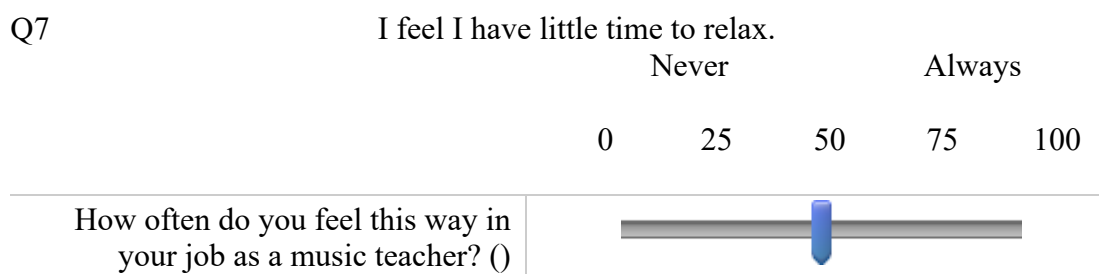
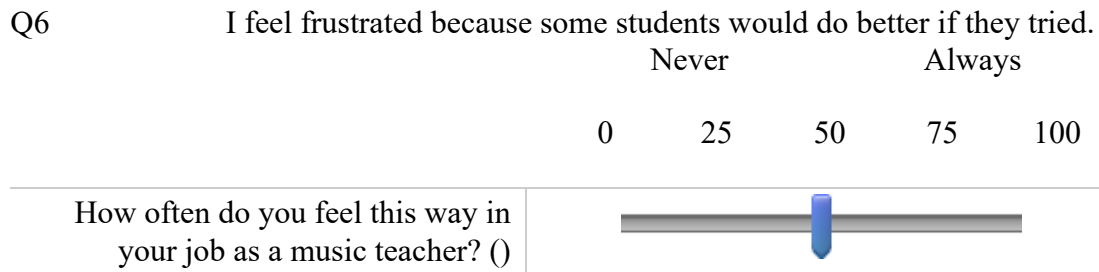


Q2 I feel that there is not enough time to get things done.



Q5 I respond to stress by feeling depressed.



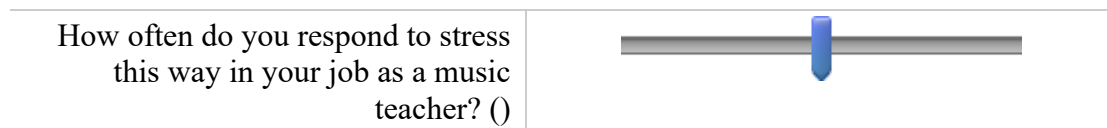




Q10 I feel my class/ensemble is too big.



Q11 I respond to stress with physical exhaustion.

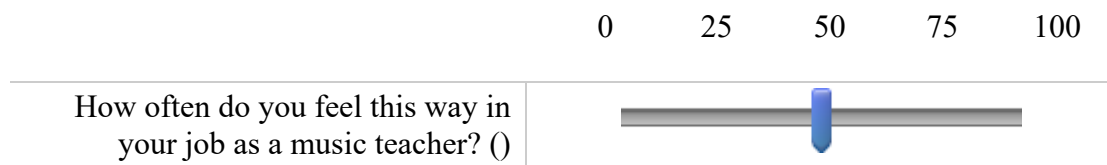


Q12 I feel I need more status and respect on my job.

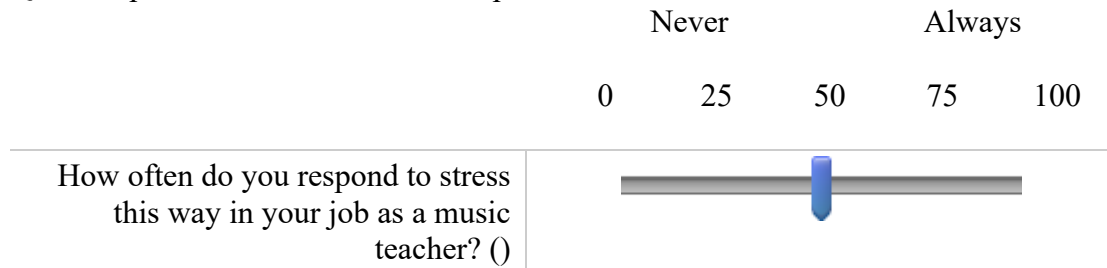


Q13 I feel I need more recognition for the extra work and/or good teaching I do.

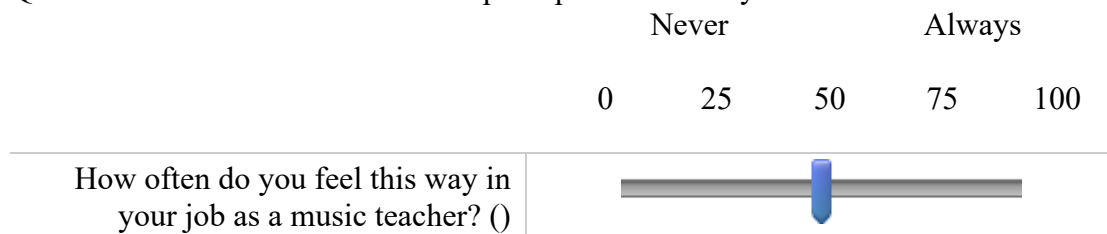




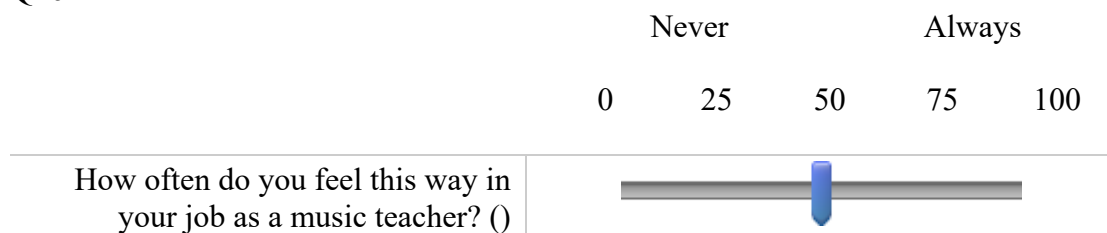
Q14 I respond to stress with stomach pain of extended duration.



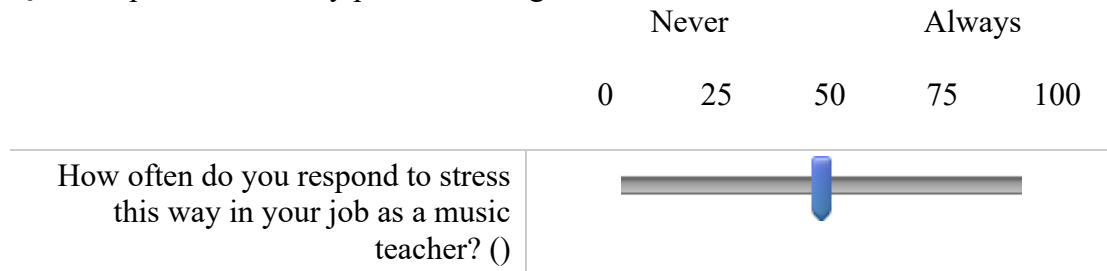
Q15 I feel frustrated because of discipline problems in my classroom.



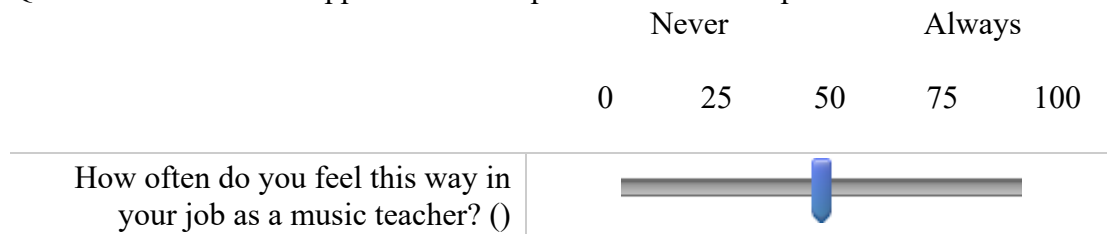
Q16 I feel I need more control over decisions made about classroom/school matters.



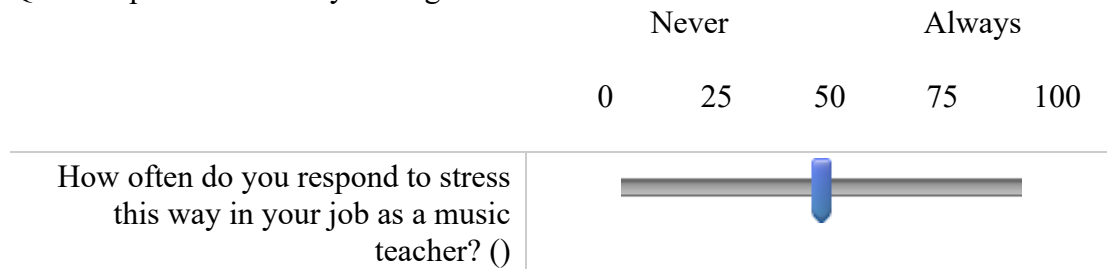
Q17 I respond to stress by procrastinating.



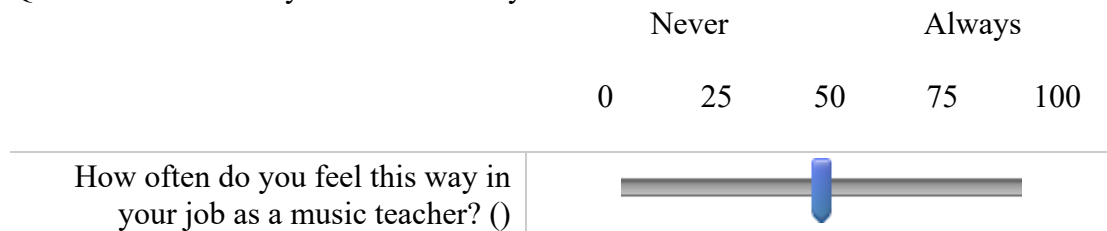
Q18 I feel I need more opportunities for professional development.



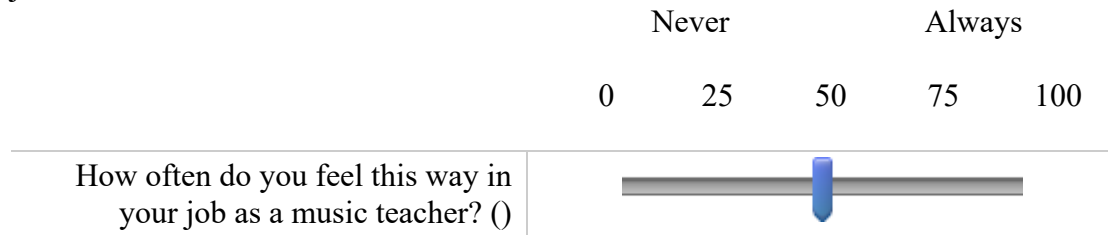
Q19 I respond to stress by calling in sick.



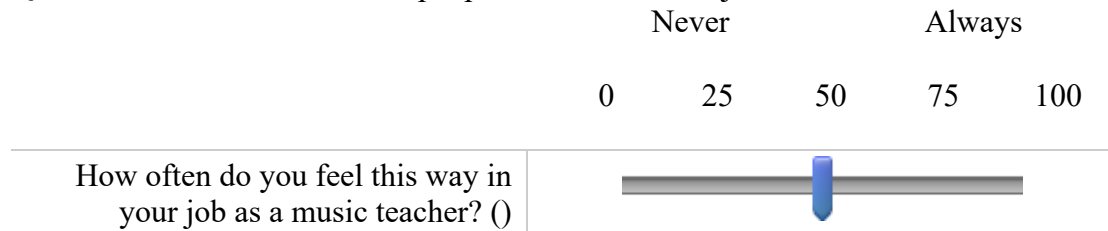
Q20 I feel emotionally drained from my work.



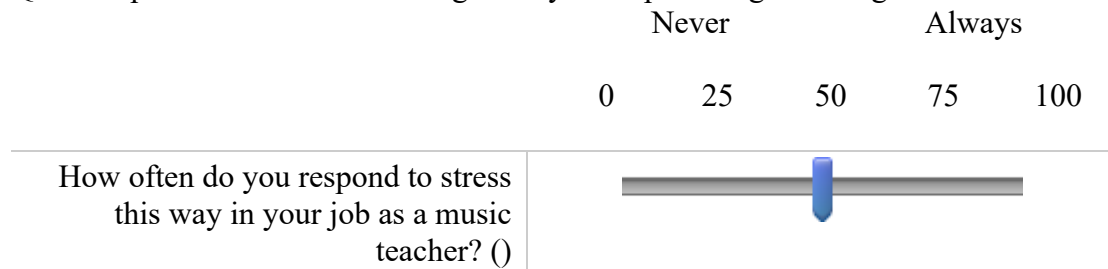
Q21 I feel fatigued when I get up in the morning and have to face another day on the job.



Q22 I feel more callous toward people since I took this job.



Q23 I respond to stress with feelings of my heart pounding or racing.



Q24 I feel this job is hardening me emotionally.



How often do you feel this way in your job as a music teacher? ()	
---	--

Q25 I feel I am unable to positively influence other people's lives through my work.

Never Always


0 25 50 75 100

How often do you feel this way in your job as a music teacher? ()	
---	--

Q26 I respond to stress by feeling anxious.

Never Always

0 25 50 75 100

How often do you respond to stress this way in your job as a music teacher? ()	
--	--

Q27 I feel I have not accomplished many worthwhile things in this job.

Never Always

0 25 50 75 100

How often do you feel this way in your job as a music teacher? ()	
---	--

End of Block: Default Question Block

Appendix E: Surveys Used to Measure Eligibility, Demographic, and Descriptive Variables

Start of Block: Default Question Block

Q9 Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Controlled Trial

Purpose of the Study: This research is being conducted by Dana Arbaugh Varona at the University of Maryland, College Park. I am inviting you to participate in this research project because you are currently a K-12 music educator and member of the National Association for Music Education (NAfME). The primary purpose of this study is twofold: 1) To examine the effects of a mindfulness-based intervention on K-12 music educators' self-reported responses to occupational stress and burnout; and 2) To uncover the experiences of K-12 music educators who underwent a four-week web-based mindfulness-based intervention. Additionally, a secondary purpose of this study is to determine if there are any potential relationships between participants' demographic information and teaching settings and their self-reported response to occupational stress and burnout.

Procedures: The procedures involve participating in a four-week-long online mindfulness training program at your own pace. This involves completing three brief (5-20 minutes) guided audio meditations, reading no more than two brief articles on mindfulness for teachers, watching one brief YouTube video on mindfulness in the classroom, and learning about and implementing one simple mindfulness-based strategy for music teachers each week. This will amount to roughly one hour of time spent on mindfulness training per week, at any time or place that is convenient for you. Additionally, I ask that you complete three brief (~5-10-minute) surveys throughout the course of the study. These surveys will ask how many times you experienced feelings and responses in relation to your job as a music teacher. The following items are representative of those found in the surveys: 1) There isn't enough time to get things done. 2) I respond to stress by procrastinating. At the end of the final survey, I will ask you a few open-ended and selected response questions about your experience with mindfulness training.

Potential Risks and Discomforts: Although there are no known risks associated with undergoing mindfulness training, it is possible that you could find it uncomfortable to pay attention to uncomfortable sensations within your body. However, there are no physical risks associated with undergoing this study. The mindfulness training exercises such as guided audio meditations and brief articles and videos were all designed by highly-trained mindfulness experts at major universities. Further, I (the principal investigator) am both a former K-12 music educator and a mindfulness practitioner of over 10 years. I am available to work individually with participants should they have any questions or experience any discomfort. There is a

slight chance that you might also feel temporary discomfort when responding to questions about your occupational stress and burnout levels. You can find mental health professionals in your area by accessing the following link:
<https://www.psychologytoday.com/us/therapists>

Potential Benefits: While there are no guaranteed direct benefits to participants, I hope that the knowledge you learn from this scientifically supported four-week course can be applied to various areas of your life. You may also experience better outcomes after training, such as better emotional health, less work-related stress, and/or better sleep, but you might also not experience these benefits. Additionally, the results of this study will not only contribute to the growing body of research on mindfulness training for the purpose of stress and burnout reduction in K-12 teachers (less than 20 such studies currently exist), but will contribute to the music education literature as well. In music education research, there have been, to the best of my knowledge, no studies that examined interventions for the purpose of reducing music teacher stress and burnout. Thus, this study would be the first of its kind.

Confidentiality: Information gathered in this research study may be published or presented in public forums such as research conferences; however, your name and other identifying information will not be used or revealed. You will be assigned a de-identifying “subject ID” so that all identifying information (e.g., name, etc.) can be removed from individual data sets, and the key linking you to your personal information will be kept in a password-protected document, separate from the data. However, despite my best efforts to keep all personal information private, absolute privacy and confidentiality cannot be guaranteed. All records will be kept in a password-protected computer that can only be accessed by myself. All information obtained during the study will be held in strict confidence. Any identifying data will be destroyed as soon as data collection is complete (estimated March 2019) to reduce the risk of breach of confidentiality.

Medical Treatment: The University of Maryland does not provide any medical, hospitalization or other insurance for participants in this research study, nor will the University of Maryland provide any medical treatment or compensation for any injury sustained as a result of participation in this research study, except as required by law.

Compensation: There will be no compensation for completing any portion of this study. You are free to keep and use all materials provided to you in the mindfulness training regardless of whether or not you participate in the entire study.

Right to Withdraw and Questions: Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact

the investigator:

Dana Arbaugh Varona
2130D Clarice Smith Performing Arts Center
8270 Alumni Drive College Park, MD 20742
dvarona@umd.edu

Participant Rights: If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:

University of Maryland College Park
Institutional Review Board Office
1204 Marie Mount Hall
College Park, Maryland, 20742
E-mail: irb@umd.edu
Telephone: 301-405-0678

For more information regarding participant rights, please visit:
<https://research.umd.edu/irb-research-participants>

This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

Statement of Consent

Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.

If you agree to participate, please check "yes" below.

6. Yes, I agree to participate in this study. (1)
7. No, I do not agree to participate in this study. (2)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

Q1 Preferred email address (please use same email address for entirety of study, as it's how I will track your responses and get in touch with you should I have any questions)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

Q13 Confirm your email address. Please enter your preferred email address again. It's the only way for me to send you a formal invitation to begin mindfulness training.

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

Q17 Are you at least 18 years old?

- 8. Yes (4)
- 9. No (5)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q19 What is your age?

18 28 39 49 59 69 80 90 100

Age ()	
--------	--

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q2 Do you currently teach music in a public or a private school that serves students in any grade between K-12?

10. Yes (1)

11. No (2)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q15 Why are you interested in undergoing mindfulness training?

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q21 What is your gender?

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q23 Are you of Hispanic or Latino origin?

12. Yes (1)

13. No (2)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q25 What is your race? Check all that apply.

- White (1)
- Black or African American (2)
- Asian (3)
- American Indian or Alaska Native (4)
- Native Hawaiian or Other Pacific Islander (5)
- Other (6)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

And What is your race? Check all that apply. = Other

Q27 Please specify your race.

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q29 Is your main K-12 teaching assignment in a public or a private school?

14. Public school (1)

15. Private school (2)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q31 Are the majority of your K-12 students in primary school (K-5) or secondary school (6-12)?

16. Primary school (K-5) (1)

17. Secondary school (6-12) (2)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q33 How many years have you taught music at a public or a private school?

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q35 Are you likely to leave the music education profession at the end of the school year?

18. Yes (1)

19. No (2)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

And Are you likely to leave the music education profession at the end of the school year? = Yes

Q37 Is your likeliness to leave the profession due to burnout?

20. Yes (1)

21. No (2)

Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q39 How many hours do you spend before and after school and on the weekend performing school-related activities during a typical workweek?

0 13 25 38 50 63 75 88 100



Display This Question:

If Consent to Participate Title: Music Teachers, Stress, Burnout, and Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.

And Are you at least 18 years old? = Yes

Q41 To what extent do you agree with the following statements?

	Strongly Agree (1)	Somewhat Agree (2)	Somewhat Disagree (3)	Strongly Disagree (4)
I am satisfied with my teaching salary. (1)	22.	23.	24.	25.
The school administration's behavior toward me is supportive and encouraging. (2)	26.	27.	28.	29.
I receive a great deal of support from parents for the work I do. (3)	30.	31.	32.	33.

Display This Question:

*If Consent to Participate Title: Music Teachers, Stress, Burnout, and
Mindfulness: A Randomized Cont... = Yes, I agree to participate in this study.*

Or Are you at least 18 years old? = No

Q3 Thank you for your interest in enrolling in this study! Once your consent form is received, you will receive further instructions about when you will be invited to begin four weeks of free web-based mindfulness training. Should you have any questions, please don't hesitate to contact me at dvarona@umd.edu.

Display This Question:

*If Do you currently teach music in a public or a private school that serves
students in any grade be... = No*

*Or Consent to Participate Title: Music Teachers, Stress, Burnout, and
Mindfulness: A Randomized Cont... = No, I do not agree to participate in this study.*

Q8 Thank you for your consideration. You will not be enrolled in this study at this time. Please close this window at any time to exit this survey.

End of Block: Default Question Block

Start of Block: Block 1

Appendix F: Posttest Questions about Experience and Feasibility

Start of Block: Block 1

Q41 This final section contains selected response and open-ended questions to help me better understand your experience with mindfulness training.

Q28 Which device(s) did you use to access the mindfulness training? Please check all that apply.

- ☐ Computer (1)
 - ☐ Smartphone (2)
 - ☐ Tablet (3)
 - ☐ Other (4)
-

Display This Question:

If Which device(s) did you use to access the mindfulness training? Please check all that apply. = Other

Q29 Please list which device you used to access the mindfulness training.

Q30 Where did you access the mindfulness training? Please check all that apply.

- ☐ Work (1)
- ☐ Home (2)
- ☐ While riding public transportation (3)
- ☐ Other (4)

Display This Question:

If Where did you access the mindfulness training? Please check all that apply. = Other

Q31 Please list all locations where you accessed the mindfulness training.

Q32 Would you recommend this mindfulness training to a fellow music educator for the purpose of reducing work stress and burnout?

- ☐ Yes (1)
- ☐ No (2)

Q33 Did you find this mindfulness training to be feasible while working as a music teacher?

- ☐ Yes (1)
- ☐ No (2)
-

Display This Question:

If Did you find this mindfulness training to be feasible while working as a music teacher? = Yes

Q34 What characteristics did you feel made it feasible while working as a music teacher?

Display This Question:

If Did you find this mindfulness training to be feasible while working as a music teacher? = No

Q35 What characteristics did you feel made it difficult while working as a music teacher?

Q38 Consider a stressful event in your job as a music teacher in the past four weeks. Please briefly describe this incident.

Q39 Briefly describe how you responded to this incident.

Q40 Was your mindfulness training a factor in how you responded to this incident?

Q44 If you would like to receive a letter on official University of Maryland letterhead stating your completion of this training program, please type your full name, the full name of your school, and the person to whom you would like the letter addressed in the box below. If there is anything else you need me to include in the letter, please state it here as well. Once I craft a letter of your completion, I'll send you a PDF via email. While I can't guarantee that your school or district will accept the proof of completion toward professional development or continuing education hours, I have been given permission by my dissertation advisors to provide such a letter in case they will accept it.

End of Block: Block 1

Glossary

If needed.

References

- Amaro, H., Spear, S., Vallejo, Z., Conron, K., & Black, D. S. (2014). Feasibility, acceptability, and preliminary outcomes of a mindfulness-based relapse prevention intervention for culturally-diverse, low-income women in substance use disorder treatment. *Substance Use & Misuse*, 49(5), 547-559. doi.org/10.3109/10826084.2013.852587
- Baird, T. N. (2016). *Music majors and meditation practice: A phenomenological study* (Doctoral dissertation). Retrieved from ProQuest dissertations & theses global. (ProQuest Number: 10126974)
- Baguley, T. S. (2008). Standardized or simple effect size: What should be reported? *British Journal of Psychology*, 100(3), 603-617. https://doi.org/10.1348/000712608X377117
- Bazan, D. (2011). The use of student-directed instruction by middle school band teachers. *Bulletin of the Council for Research in Music Education*, 189, 23-56. doi.org/10.5406/bulcouresmusedu.189.0023
- Benmansour, N. (1998). Job Satisfaction, Stress and Coping Strategies among Moroccan High School Teachers. *Mediterranean Journal of Educational Studies*, 3(1), 13-33. Retrieved from eric.ed.gov/?id=EJ571271
- Benn, R., Akiva, T., Arel, S., & Roeser, R. W. (2012). Mindfulness training effects for parents and educators of children with special needs. *Developmental Psychology*, 48(5), 1476-1487. https://doi.org/10.1037/a0027537
- Bennett, K., & Dorjee, D. (2016). The impact of a Mindfulness-Based Stress Reduction course (MBSR) on well-being and academic attainment of sixth-

- form students. *Mindfulness*, 7(1), 105-114. <https://doi.org/10.1007/s12671-015-0430-7>
- Beshai, S., McAlpine, L., Weare, K., & Kuyken, W. (2016). A non-randomised feasibility trial assessing the efficacy of a mindfulness-based intervention for teachers to reduce stress and improve well-being. *Mindfulness*, 7(1), 198-208. <https://doi.org/10.1007/s12671-015-0436-1>
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., ... & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, 11(3), 230-241. <https://doi.org/10.1093/clipsy.bph077>
- Bodenlos, J. S., Noonan, M., & Wells, S. Y. (2013). Mindfulness and alcohol problems in college students: The mediating effects of stress. *Journal of American College Health*, 61(6), 371-378. <https://doi.org/10.1080/07448481.2013.805714>
- Boekaerts, M. (1993). Being concerned with well-being and with learning. *Educational Psychologist*, 28(2), 149-167. https://doi.org/10.1207/s15326985ep2802_4
- Boiteau, J. L. (2018). *The Influence of Mindful Movement on Elementary Students' Music Listening Enjoyment and Comprehension* Retrieved from ProQuest dissertations & theses global. (ProQuest Number: 10788863)
- Borkovec, T. D., & Inz, J. (1990). The nature of worry in generalized anxiety disorder: A predominance of thought activity. *Behaviour Research and Therapy*, 28(2), 153-158. [https://doi.org/10.1016/0005-7967\(90\)90027-g](https://doi.org/10.1016/0005-7967(90)90027-g)

- Borman, G. D., & Dowling, N. M. (2008). Teacher attrition and retention: A meta-analytic and narrative review of the research. *Review of Educational Research*, 78(3), 367-409. <https://doi.org/10.3102/0034654308321455>
- Boyce, B. (2015). Five things people get wrong about mindfulness. *Foundation for a Mindful Society*. Retrieved from <https://www.mindful.org/5-things-people-get-wrong-about-mindfulness/>
- Bradley, E. H., Curry, L. A., Ramanadhan, S., Rowe, L., Nembhard, I. M., & Krumholz, H. M. (2009). Research in action: using positive deviance to improve quality of health care. *Implementation Science*, 4(1). <https://doi.org/10.1186/1748-5908-4-25>
- Breines, J. G., & Chen, S. (2013). Activating the inner caregiver: The role of supporting schemas in increasing state self-compassion. *Journal of Experimental Social Psychology*, 49(1), 58-64. <https://doi.org/10.1016/j.jesp.2012.07.015>
- Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry*, 18(4), 211-237. <https://doi.org/10.1080/10478400701598298>
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822-848. <https://doi.org/10.1037/0022-3514.84.4.822>
- Bryman, A. (2006). Paradigm peace and the implications for quality. *International Journal of Social Research Methodology*, 9(2). <https://doi.org/10.1080/13645570600595280>

- Canby, N. K., Cameron, I. M., Calhoun, A. T., & Buchanan, G. M. (2015). A brief mindfulness intervention for healthy college students and its effects on psychological distress, self-control, meta-mood, and subjective vitality. *Mindfulness*, 6(5), 1071-1081. <https://doi.org/10.1007/s12671-014-0356-5>
- Cavanagh, K., Strauss, C., Cicconi, F., Griffiths, N., Wyper, A., & Jones, F. (2013). A randomised controlled trial of a brief online mindfulness-based intervention. *Behaviour Research and Therapy*, 51(9), 573–578. <https://doi.org/10.1016/j.brat.2013.06.003>
- Center for Mindfulness, (2018). “FAQs–MBSR–MBCT,” *Center for Mindfulness in Medicine, Health Care, and Society*. Retrieved from <https://www.umassmed.edu/cfm/mindfulness-based-programs/faqs-mbsr-mbct/>
- Cherkin, D. C., Sherman, K. J., Balderson, B. H., Cook, A. J., Anderson, M. L., Hawkes, R. J., ... & Turner, J. A. (2016). Effect of mindfulness-based stress reduction vs cognitive behavioral therapy or usual care on back pain and functional limitations in adults with chronic low back pain: a randomized clinical trial. *JAMA: The Journal of the American Medical Association*, 315(12), 1240-1249. <https://doi.org/10.1001/jama.2016.2323>
- Chiesa, A., Serretti, A., & Jakobsen, J. C. (2013). Mindfulness: top-down or bottom-up emotion regulation strategy? *Clinical Psychology Review*, 33(1), 82–96. <http://doi.org/10.1016/j.cpr.2012.10.006>.

- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385-396.
<https://doi.org/10.2307/2136404>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the U.S. in S. Spacapan & S. Oskamp (Eds.), *The social psychology of health: Claremont symposium on applied social psychology* (pp. 31-67). Newbury Park, CA: Sage.
- Coholic, D. A. (2011). Exploring the feasibility and benefits of arts-based mindfulness-based practices with young people in need: Aiming to improve aspects of self-awareness and resilience. *Child & Youth Care Forum*, 40(4), 303-317.
<https://doi.org/10.1007/s10566-010-9139-x>
- Coholic, D., Eys, M., & Lougheed, S. (2012). Investigating the effectiveness of an arts-based and mindfulness-based group program for the improvement of resilience in children in need. *Journal of Child and Family Studies*, 21(5), 833-844. <https://doi.org/10.1007/s10826-011-9544-2>
- Conway, C., Micheel-Mays, C., & Micheel-Mays, L. (2005). A narrative study of student teaching and the first year of teaching: Common issues and struggles. *Bulletin of the Council for Research in Music Education*, 165, 65-77.
Retrieved from <https://www.jstor.org/stable/40319271>

- Conway, C., Eros, J., Pellegrino, K., & West, C. (2010). Instrumental music education students' perceptions of tensions experienced during their undergraduate degree. *Journal of Research in Music Education*, 58(3), 260-275. <https://doi.org/10.1177/0022429410377114>
- Costello, E., & Lawler, M. (2014). An Exploratory Study of the Effects of Mindfulness on Perceived Levels of Stress among school-children from lower socioeconomic backgrounds. *International Journal of Emotional Education*, 6(2), 21-39. Retrieved from <https://eric.ed.gov/?id=EJ1085614>
- Cullen, M., & Brito, C. G. (2014). Mindfulness-based emotional balance: navigating life's "full catastrophe" with greater ease and resilience. Oakland, CA: New Harbinger Press.
- Cullen, M. (2011). Mindfulness-based interventions: An emerging phenomenon. *Mindfulness*, 2(3), 186-193. <https://doi.org/10.1007/s12671-011-0058-1>
- Dane, E., & Brummel, B. J. (2014). Examining workplace mindfulness and its relations to job performance and turnover intention. *Human Relations*, 67(1), 105-128. <https://doi.org/10.1177/0018726713487753>
- Darling-Hammond, L. (2001). The challenge of staffing our schools. *Educational Leadership*, 58(8), 12-17. Retrieved from <https://eric.ed.gov/?id=EJ637135>
- Demarzo, M., Montero-Marin, J., Puebla-Guedea, M., Navarro-Gil, M., Herrera-Mercadal, P., Moreno-González, S., ... & Garcia-Campayo, J. (2017). Efficacy of 8-and 4-session mindfulness-based interventions in a non-clinical

- population: A controlled study. *Frontiers in Psychology*, 8(1343), 1-12.
<https://doi.org/10.3389/fpsyg.2017.01343>
- Dews, C. B., & Williams, M. S. (1989). Student musicians' personality styles, stresses, and coping patterns. *Psychology of Music*, 17(1), 37-47.
<https://doi.org/10.1177/0305735689171004>
- Diaz, F. M. (2018). "Mindfulness in teaching and learning." *Jacobs School of Music, Indiana University, Bloomington*. Retrieved from
<https://music.indiana.edu/precollege/adult/mindfulness/schedule.shtml>
- Diaz, F. M. (2018). Relationships Among Meditation, Perfectionism, Mindfulness, and Performance Anxiety Among Collegiate Music Students. *Journal of Research in Music Education*, 66(2), 150-167.
<https://doi.org/10.1177/0022429418765447>
- Diaz, F. M. (2013). Mindfulness, attention, and flow during music listening: An empirical investigation. *Psychology of Music*, 41(1), 42-58.
<http://doi.org/10.1177/0305735611415144>
- Dodd, S., White, I. R., & Williamson, P. (2012). Nonadherence to treatment protocol in published randomised controlled trials: a review. *Trials*, 13(1), 84.
<https://doi.org/10.1186/1745-6215-13-84>
- Doss, J. A. (2016). *Perceived stress among public school music educators: Stress over time, demographic differences, common self-identified factors of stress, and relationships between demographic differences and emergent stress themes* (Doctoral dissertation). Retrieved from ProQuest dissertations & theses global. (ProQuest Number: 10125196)

- Durlak, J. A. (2009). How to select, calculate, and interpret effect sizes. *Journal of pediatric psychology*, 34(9), 917-928. <https://doi.org/10.1093/jpepsy/jsp004>
- Emerson, L. M., Leyland, A., Hudson, K., Rowse, G., Hanley, P., & Hugh-Jones, S. (2017). Teaching mindfulness to teachers: A systematic review and narrative synthesis. *Mindfulness*, 8(5), 1136-1149. <https://doi.org/10.1007/s12671-017-0691-4>
- Falsafi, N. (2016). A randomized controlled trial of mindfulness versus yoga: effects on depression and/or anxiety in college students. *Journal of the American Psychiatric Nurses Association*, 22(6), 483-497. <https://doi.org/10.1177/1078390316663307>
- Falter, H. E. (2016). Mindfulness: an underused tool for deepening music understanding. *General Music Today*, 30(1), 20-24. <https://doi.org/10.1177/1048371316641461>
- Farber, B. A. (2000). Treatment strategies for different types of teacher burnout. *Journal of Clinical Psychology*, 56(5), 675-689. [https://doi.org/10.1002/\(sici\)1097-4679\(200005\)56:5<675::aid-jclp8>3.0.co;2-d](https://doi.org/10.1002/(sici)1097-4679(200005)56:5<675::aid-jclp8>3.0.co;2-d)
- Farias, M. & Wilkhalm, C. (2019). *The Buddha pill: Can meditation change you?* London: Watkins Publishing.
- Felleman, B. I., Stewart, D. G., Simpson, T. L., Heppner, P. S., & Kearney, D. J. (2016). Predictors of depression and PTSD treatment response among veterans participating in mindfulness-based stress

reduction. *Mindfulness*, 7(4), 886-895. <https://doi.org/10.1007/s12671-016-0527-7>

Figueras, E. J. (2014). *Constructing and contextualizing a multi-dimensional burnout profile of high school music teachers*. Retrieved from ProQuest dissertations & theses global. (ProQuest Number: 3662685.)

Fink, A. (2003). *The survey handbook* (Vol. 1). Thousand Oaks, CA: Sage.

Flook, L., Goldberg, S. B., Pinger, L., Bohus, K., & Davidson, R. J. (2013).

Mindfulness for teachers: A pilot study to assess effects on stress, burnout, and teaching efficacy. *Mind, Brain, and Education*, 7(3), 182-195.

<https://doi.org/10.1111/mbe.12026>

Fimian, M. J. (1988). *The teacher concerns inventory*. Brandon, VT: Clinical Psy Publishing.

Folkman, S., & Lazarus, R. S. (1990). Coping and emotion. In N. L. Stein, B.

Leventhal, & T. R. Trabasso (Eds.) *Psychological and Biological Approaches to Emotion*, 313-332. Hillsdale, NJ: Lawrence Erlbaum Associates.

Forkmann, T., Brakemeier, E. L., Teismann, T., Schramm, E., & Michalak, J. (2016).

The effects of Mindfulness-Based Cognitive Therapy and Cognitive Behavioral Analysis System of Psychotherapy added to Treatment as Usual on suicidal ideation in chronic depression: Results of a randomized-clinical trial. *Journal of Affective Disorders*, 200, 51-57.

<https://doi.org/10.1016/j.jad.2016.01.047>

Frank, J. L., Reibel, D., Broderick, P., Cantrell, T., & Metz, S. (2015). The effectiveness of mindfulness-based stress reduction on educator stress and

well-being: Results from a pilot study. *Mindfulness*, 6(2), 208-216.

<https://doi.org/10.1007/s12671-013-0246-2>

Gardner, R. D. (2006). *The development of a theoretical model to predict retention, turnover, and attrition of K-12 music teachers in the United States: An analysis of the Schools and Staffing Survey and Teacher Follow-up Survey (1999-2001)*. Retrieved from ProQuest dissertations & theses global. (ProQuest Number: 3214714)

Gardner, R. D. (2010). Should I stay or should I go? Factors that influence the retention, turnover, and attrition of K-12 music teachers in the United States. *Arts Education Policy Review*, 111(3), 112-121.
<https://doi.org/10.1080/10632910903458896>

Garland, E. L., Gaylord, S. A., & Fredrickson, B. L. (2011). Positive reappraisal coping mediates the stress-reductive effect of mindfulness: an upward spiral process. *Mindfulness*, 2(1), 59–67. <https://doi.org/10.1007/s12671-011-0043-8>

Gluck, T. M., & Maercker, A. (2011). A randomized controlled pilot study of a brief web-based mindfulness training. *BMC Psychiatry*, 11(1).
<https://doi.org/10.1186/1471-244x-11-175>

Godwin, M., Ruhland, L., Casson, I., MacDonald, S., Delva, D., Birtwhistle, R., ... & Seguin, R. (2003). Pragmatic controlled clinical trials in primary care: the struggle between external and internal validity. *BMC Medical Research Methodology*, 3(1), 28. <https://doi.org/10.1186/1471-2288-3-28>

- Goetz, J. L., Keltner, D., & Simon-Thomas, E. (2010). Compassion: an evolutionary analysis and empirical review. *Psychological Bulletin*, 136(3), 351–374.
<https://doi.org/10.1037/a0018807>
- Gold, E., Smith, A., Hopper, I., Herne, D., Tansey, G., & Hulland, C. (2010). Mindfulness-based stress reduction (MBSR) for primary school teachers. *Journal of Child and Family Studies*, 19(2), 184-189.
<https://doi.org/10.1007/s10826-009-9344-0>
- Gordon, D. (2000). Sources of stress for the public school music teacher: Four case studies. *Contributions to Music Education*, 27(1), 27-40. Retrieved from <https://www.jstor.org/stable/24127016>
- Gordon, D. G. (2001). Classroom management problems and solutions: A few basic guidelines for classroom management can improve student behavior and reduce stress on the music educator. *Music Educators Journal*, 88(2), 17-23.
<https://doi.org/10.2307/3399737>
- Gordon, D. G. (2002). Discipline in the music classroom: One component contributing to teacher stress. *Music Education Research*, 4(1), 157-165.
<https://doi.org/10.1080/14613800220119831>
- Gross, J. J. (1998). The emerging field of emotion regulation: an integrative review. *Review of General Psychology*, 2(3), 271-299.
<https://doi.org/10.1037//1089-2680.2.3.271>
- Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.) *Handbook of Emotion Regulation* (pp. 3-24). New York, NY: The Guilford Press.

- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348-362.
<https://doi.org/10.1037/0022-3514.85.2.348>
- Gu, J., Strauss, C., Bond, R., & Cavanagh, K. (2015). How do mindfulness-based cognitive therapy and mindfulness-based stress reduction improve mental health and wellbeing? A systematic review and meta-analysis of mediation studies. *Clinical Psychology Review*, 37, 1-12.
<https://doi.org/10.1016/j.cpr.2015.01.006>
- Hamann, D. L., & Gordon, D. G. (2000). Burnout: An occupational hazard. *Music Educators Journal*, 87(3), 34-39. <https://doi.org/10.2307/3399661>
- Hamann, D. L., Daugherty, E., & Mills, C. R. (1987). An investigation of burnout assessment and potential job related variables among public school music educators. *Psychology of Music*, 15(2), 128-140.
<https://doi.org/10.1177/0305735687152002>
- Hancock, C. B. (2008). Music Teachers at Risk for Attrition and Migration: An Analysis of the 1999—2000 Schools and Staffing Survey. *Journal of Research in Music Education*, 56(2), 130-144.
<https://doi.org/10.1177/0022429408321635>
- Harnett, P. H., Whittingham, K., Puhakka, E., Hodges, J., Spry, C., & Dob, R. (2010). The short-term impact of a brief group-based mindfulness therapy program on depression and life satisfaction. *Mindfulness*, 1(3), 183-188.
<https://doi.org/10.1007/s12671-010-0024-3>

- Harrell, P., Leavell, A., van Tassel, F., & McKee, K. (2004). No teacher left behind: Results of a five-year study of teacher attrition. *Action in Teacher Education*, 26(2), 47-59. <https://doi.org/10.1080/01626620.2004.10463323>
- Harrison, J. L. (2014). *Assessing generic and program-specific dose-response relations between engagement in contemplative practices and reductions in teachers' occupational stress and burnout*. Retrieved from ProQuest dissertations & theses global. (ProQuest Number: 1572682)
- Hedden, D. G. (2005). A study of stress and its manifestations among music educators. *Bulletin of the Council for Research in Music Education*, 166, 57-67. Retrieved from <https://www.jstor.org/stable/40319280>
- Heston, M. L., Dedrick, C., Raschke, D., & Whitehead, J. (1996). Job satisfaction and stress among band directors. *Journal of Research in Music Education*, 44(4), 319-327. <https://doi.org/10.2307/3345444>
- Hildebrandt, H., Nübling, M., & Candia, V. (2012). Increment of fatigue, depression, and stage fright during the first year of high-level education in music students. *Medical Problems of Performing Artists*, 27(1), 43. Retrieved from <https://www.sciandmed.com/MPPA/journalviewer.aspx?issue=1195&article=1936>
- Hoffman, L. W., & Hoffman, M. L. (1973). The value of children to parents. In J.T. Fawcett (Ed.) *Psychological Perspective on Population* (pp. 19-76). New York, NY: Basic Books.
- Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of

action from a conceptual and neural perspective. *Perspectives on Psychological Science*, 6(6), 537–559.

<https://doi.org/10.1177/1745691611419671>

Howes, L. M., & Goodman-Delahunty, J. (2015). Teachers' career decisions: Perspectives on choosing teaching careers, and on staying or leaving. *Issues in Educational Research*, 25(1), 18-35. Retrieved from <http://www.iier.org.au/iier25/howes.pdf>

Hue, M. T., & Lau, N. S. (2015). Promoting well-being and preventing burnout in teacher education: A pilot study of a mindfulness-based programme for pre-service teachers in Hong Kong. *Teacher Development*, 19(3), 381-401. <https://doi.org/10.1080/13664530.2015.1049748>

Hylton, J. (1989). Ways to manage stress and avoid teacher burnout. *Music Educators Journal*, 75(6), 29-31. <https://doi.org/10.2307/3398125>

International Labour Office. (1993). *Preventing stress at work: Conditions of work digest*. Geneva, Switzerland: International Labour Organization.

Iwanicki, E. F., & Schwab, R. L. (1981). A cross validation study of the Maslach Burnout Inventory. *Educational and Psychological Measurement*, 41(4), 1167-1174. <https://doi.org/10.1177/001316448104100425>

Jain, S., Shapiro, S. L., Swanick, S., Roesch, S. C., Mills, P. J., Bell, I., & Schwartz, G. E. (2007). A randomized controlled trial of mindfulness meditation versus relaxation training: effects on distress, positive states of mind, rumination, and distraction. *Annals of Behavioral Medicine*, 33(1), 11-21. https://doi.org/10.1207/s15324796abm3301_2

- Jennings, P. A., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2011). Improving classroom learning environments by cultivating awareness and resilience in education (CARE): Results of two pilot studies. *The Journal of Classroom Interaction*, 46(1), 37-48. <https://doi.org/10.1037/spq0000035>
- Jennings, P. A., Frank, J. L., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by Cultivating Awareness and Resilience in Education (CARE): Results of a randomized controlled trial. *School Psychology Quarterly*, 28(4), 374-390. <https://doi.org/10.1037/spq0000035>
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491-525. <https://doi.org/10.3102/0034654308325693>
- Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology*, 20(2), 178-187. <https://doi.org/10.1108/02683940510579803>
- Kabat-Zinn, J. (1990). Full catastrophe living: Using the wisdom of your body and mind to face stress, pain and illness. New York, NY: Delacorte.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: past, present, and future. *Clinical Psychology: Science and Practice*, 10(2), 144-156. <https://doi.org/10.1093/clipsy/bpg016>
- Kabat-Zinn, J. (1994). *Wherever you go, there you are: mindfulness meditation in*

- everyday life*. New York, NY: Hyperion.
- Kabat-Zinn, J., Lipworth, L., & Burney, R. (1985). The clinical use of mindfulness meditation for the self-regulation of chronic pain. *Journal of Behavioral Medicine*, 8(2), 163-190. <https://doi.org/10.1007/bf00845519>
- Kim, H. H. (2018). The meditation industry. *SAGE Business Researcher*. Retrieved from <http://businessresearcher.sagepub.com/sbr-1946-105603-2878495/20180129/the-meditation-industry>
- Klimecki, O. M., Leiberg, S., Lamm, C., & Singer, T. (2012). Functional neural plasticity and associated changes in positive affect after compassion training. *Cerebral Cortex*, 23(7), 1552-1561. <https://doi.org/10.1093/cercor/bhs142>
- Kosslyn, S. M., & Rosenberg, R. S. (2001). *Psychology: The brain, the person, the world* (Vol. 1). Upper Saddle River, NJ: Prentice Hall.
- Krueger, P. J. (2000). Beginning music teachers: Will they leave the profession?. *Update: Applications of Research in Music Education*, 19(1), 22-26. <https://doi.org/10.1177/875512330001900105>
- Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review*, 53(1), 27-35. <https://doi.org/10.1080/00131910124115>
- Larsen, R. J., & Kasimatis, M. (1997). Day-to-day physical symptoms: Individual differences in the occurrence, duration, and emotional concomitants of minor daily illnesses. *Journal of Personality*, 59, 387-423. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-6494.1991.tb00254.x>

- Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York, NY: McGraw-Hill.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Lieberman, B. (2018). Mindfulness may have been over-hyped. *BBC Future*. Retrieved from <http://www.bbc.com/future/story/20180502-does-mindfulness-really-improve-our-health>
- Longe, O., Maratos, F. A., Gilbert, P., Evans, G., Volker, F., Rockliff, H., & Rippon, G. (2010). Having a word with yourself: Neural correlates of self-criticism and self-reassurance. *NeuroImage*, 49(2), 1849-1856. <https://doi.org/10.1016/j.neuroimage.2009.09.019>
- Lorah, J. (2018). Effect size measures for multilevel models: Definition, interpretation, and TIMSS example. *Large-scale Assessments in Education*, 6(1), 8. <https://doi.org/10.1186/s40536-018-0061-2>
- Loucks, E. B., Britton, W. B., Howe, C. J., Eaton, C. B., & Buka, S. L. (2015). Positive associations of dispositional mindfulness with cardiovascular health: The New England Family Study. *International Journal of Behavioral Medicine*, 22(4), 540-550. <https://doi.org/10.1007/s12529-014-9448-9>
- Lutz, A., Slagter, H. A., Dunne, J. D., & Davidson, R. J. (2008). Attention regulation and monitoring in meditation. *Trends in Cognitive Sciences*, 12(4), 163-169. <https://doi.org/10.1016/j.tics.2008.01.005>
- Lutz, A., Slagter, H., Rawling, N., Francis, A., Greischar, I. I., & Davidson, R. J. (2009). Mental training enhances attentional stability: neural and behavioural

evidence. *Journal of Neuroscience*, 29(42), 13418–13427.

<https://doi.org/10.1523/jneurosci.1614-09.2009>

Lutz, A., Jha, A. P., Dunne, J. D., & Saron, C. D. (2015). Investigating the phenomenological matrix of mindfulness-related practices from a neurocognitive perspective. *American Psychologist*, 70(7), 632.
<https://doi.org/10.1037/a0039585>

Lyssenko, L., Müller, G., Kleindienst, N., Schmahl, C., Berger, M., Eifert, G., ... & Bohus, M. (2015). Life Balance—a mindfulness-based mental health promotion program: Conceptualization, implementation, compliance and user satisfaction in a field setting. *BMC Public Health*, 15(1).
<https://doi.org/10.1186/s12889-015-2100-z>

MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review*, 32(6), 545-552. <https://doi.org/10.1016/j.cpr.2012.06.003>

Madsen, C. K., & Hancock, C. B. (2002). Support for music education: A case study of issues concerning teacher retention and attrition. *Journal of Research in Music Education*, 50(1), 6-19. <https://doi.org/10.1080/10632910209600035>

Maduka, I. C., Neboh, E. E., & Ufelle, S. A. (2015). The relationship between serum cortisol, adrenaline, blood glucose and lipid profile of undergraduate students under examination stress. *African Health Sciences*, 15(1), 131-136. Retrieved from <https://www.ajol.info/index.php/ahs/article/view/114122>

Marvel, J., Lyter, D. M., Peltola, P., Strizek, G. A., & Morton, B. A. (2006). Teacher attrition and mobility: Results from the 2004-2005 follow up teacher survey

(Report No. NCES 2007-307). *Washington, DC: US Government Printing Office.*

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397-422. <https://doi.org/10.1146/annurev.psych.52.1.397>

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, 2(2), 99-113. <https://doi.org/10.1002/job.4030020205>

Maslach, C., Jackson, S. E., Leiter, M. P., Schaufeli, W. B., & Schwab, R. L. (1986). *Maslach burnout inventory*. Palo Alto, CA: Consulting Psychologists Press.

McLain, B. P. (2005). Environmental support and music teacher burnout. *Bulletin of the Council for Research in Music Education*, 164, 71-84. Retrieved from <https://www.jstor.org/stable/40319261>

Meiklejohn, J., Phillips, C., Freedman, M. L., Griffin, M. L., Biegel, G., Roach, A., ... & Isberg, R. (2012). Integrating mindfulness training into K-12 education: Fostering the resilience of teachers and students. *Mindfulness*, 3(4), 291-307. <https://doi.org/10.1007/s12671-012-0094-5>

Miller, G. (2012). The smartphone psychology manifesto. *Perspectives on Psychological Science*, 7(3), 221-237. <https://doi.org/10.1177/1745691612441215>

Miksza, P. & Elpus, K. (2018). *Design and analysis for quantitative research in music education*. New York: Oxford University Press.

- Mindfulness & Psychotherapy, (2013). “What Does Non-Judgmental Awareness Really Mean?” *Psych Central*. Retrieved from <https://blogs.psychcentral.com/mindfulness/2013/03/what-does-non-judgmental-awareness-really-mean/>
- Misskey, J., Yang, C., MacDonald, S., Baxter, K., & Hsiang, Y. (2016). A comparison of revision using distal inflow and distal revascularization-interval ligation for the management of severe access-related hand ischemia. *Journal of Vascular Surgery*, 63(6), 1574-1581. <https://doi.org/10.1016/j.jvs.2015.10.100>
- Mongrain, M., Chin, J. M., & Shapira, L. B. (2011). Practicing compassion increases happiness and self-esteem. *Journal of Happiness Studies*, 12(6), 963-981. <https://doi.org/10.1007/s10902-010-9239-1>
- Montgomery, C., & Rupp, A. A. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education/Revue canadienne de l'éducation*, 28(3), 458-486. <https://doi.org/10.2307/4126479>
- Nagel, T. (1989). *The view from nowhere*. New York, NY: Oxford University Press.
- Napoli, M. (2004). Mindfulness training for teachers: A pilot program. *Complementary Health Practice Review*, 9(1), 31-42. <https://doi.org/10.1177/1076167503253435>
- Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2(3), 223–250. <https://doi.org/10.1080/15298860309027>

- Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, 41(4), 139–154. <https://doi.org/10.1016/j.jrp.2006.03.004>
- Newton, J. Z. (2015). Musical Creativity and Mindfulness Meditation: Can the Practice of Mindfulness Meditation Enhance Perceived Musical Creativity?. *International Journal of Transpersonal Studies*, 34(1), 23. <https://doi.org/10.24972/ijts.2015.34.1-2.172>
- Nunnally, J. (1978). *Psychometric methods* (2nd ed). New York: McGraw-Hill.
- Oaten, M., & Cheng, K. (2006). Longitudinal gains in self-regulation from regular physical exercise. *British Journal of Health Psychology*, 11(4), 717-733. <https://doi.org/10.1348/135910706x96481>
- Ondrich, J., Pas, E., & Yinger, J. (2008). The determinants of teacher attrition in upstate New York. *Public Finance Review*, 36(1), 112-144. <https://doi.org/10.1177/1091142106294716>
- Onwuegbuzie, A. J. (2000, November). Positivists, post-positivists, post-structuralists, and post-modernists: Why can't we all get along? Towards a framework for unifying research paradigms. Paper presented at the Annual Meeting of the Association for the Advancement of Educational Research, Ponte Vedra, FL.
- Pace, T. W., Negi, L. T., Adame, D. D., Cole, S. P., Sivilli, T. I., Brown, T. D., ... & Raison, C. L. (2009). Effect of compassion meditation on neuroendocrine, innate immune and behavioral responses to psychosocial

stress. *Psychoneuroendocrinology*, 34(1), 87-98.

<https://doi.org/10.1016/j.psyneuen.2008.08.011>

Parsad, B., Lewis, L., Farris, E., & Greene, B. (2001). Teacher preparation and development: 2000. *National Center for Statistics*. Washington, DC: US Department of Education.

Pithers, R. T., & Soden, R. (1998). Scottish and Australian teacher stress and strain: a comparative study. *British Journal of Educational Psychology*, 68(2), 269-279. <https://doi.org/10.1111/j.2044-8279.1998.tb01289.x>

Raudenbush, S. W. & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (Vol. 1). Thousand Oaks, CA: Sage.

Remmers, C., Topolinski, S., & Koole, S. L. (2016). Why being mindful may have more benefits than you realize: Mindfulness improves both explicit and implicit mood regulation. *Mindfulness*, 7(4), 829-837. <https://doi.org/10.1007/s12671-016-0520-1>

Rinpoche, R. T., & Mullen, K. (2005). The Buddhist use of compassionate imagery in mind healing (pp. 218–238). In P. Gilbert (Ed.) *Compassion: Conceptualisations, Research and Use in Psychotherapy*. London, UK: Brunner-Routledge.

Roemer, L., & Orsillo, S. M. (2003). Mindfulness: A promising intervention strategy in need of further study. *Clinical Psychology: Science and Practice*, 10(2), 172-178. <https://doi.org/10.1093/clipsy.bpg020>

Roeser, R. W., Schonert-Reichl, K. A., Jha, A., Cullen, M., Wallace, L., Wilensky, R., ... & Harrison, J. (2013). Mindfulness training and reductions in teacher

- stress and burnout: Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology*, 105(3), 787-804.
<https://doi.org/10.1037/a0032093>
- Roeser, R. W., Skinner, E., Beers, J., & Jennings, P. A. (2012). Mindfulness training and teachers' professional development: An emerging area of research and practice. *Child Development Perspectives*, 6(2), 167-173.
<https://doi.org/10.1111/j.1750-8606.2012.00238.x>
- Russell, J. A. (2012). The short and long-term career plans of secondary music educators: Characteristics of stayers, movers, and leavers. *Bulletin of the Council for Research in Music Education*, 191, 61-80.
<http://doi.org/10.5406/bulcouresmusedu.191.0061>
- Scheib, J. W. (2003). Role stress in the professional life of the school music teacher: A collective case study. *Journal of Research in Music Education*, 51(2), 124-136. <https://doi.org/10.2307/3345846>
- Scheib, J. W. (2004). Why band directors leave: From the mouths of maestros. *Music Educators Journal*, 91(1), 53-57. <https://doi.org/10.2307/3400106>
- Schussler, D. L., Jennings, P. A., Sharp, J. E., & Frank, J. L. (2016). Improving teacher awareness and well-being through CARE: A qualitative analysis of the underlying mechanisms. *Mindfulness*, 7(1), 130-142.
<https://doi.org/10.1007/s12671-015-0422-7>
- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-

- friendly meta-analysis. *Journal of Clinical Psychology*, 65(5), 467-487.
<https://doi.org/10.1002/jclp.20593>
- Shadish, W., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.
- Shapiro, S. L., Brown, K. W., Thoresen, C., & Plante, T. G. (2011). The moderation of mindfulness-based stress reduction effects by trait mindfulness: results from a randomized controlled trial. *Journal of Clinical Psychology*, 67(3), 267-277. <https://doi.org/10.1002/jclp.20761>
- Shaw, R. D. (2016). Music teacher stress in the era of accountability. *Arts Education Policy Review*, 117(2), 104-116.
<https://doi.org/10.1080/10632913.2015.1005325>
- Sherif, M., Harvey, O. J., White, B. J., Hood, W. R., & Sherif, C. W. (1961). *Intergroup conflict and cooperation: The Robber's Cave Experiment*. Norman: University of Oklahoma, Institute of Intergroup Relations.
- Shonin, E., Van Gordon, W., Dunn, T. J., Singh, N. N., & Griffiths, M. D. (2014). Meditation awareness training (MAT) for work-related wellbeing and job performance: A randomised controlled trial. *International Journal of Mental Health and Addiction*, 12(6), 806-823. <https://doi.org/10.1007/s11469-014-9513-2>
- Sims, W. (2011). Forum. *Journal of Research in Music Education*, 59(3).
<https://doi.org/10.1177/0022429411421334>
- Skinner, E.A. and Beers. J. (2016). Mindfulness and teachers' coping in the

classroom: a developmental model of teacher stress, coping and everyday resilience. K. Schonert-Reichl & R. W. Roeser (Co-Eds.), *Handbook of Mindfulness in Education* (99. 99-118). New York: Springer

- Solhaug, I., Eriksen, T. E., de Vibe, M., Haavind, H., Friborg, O., Sørli, T., & Rosenvinge, J. H. (2016). Medical and psychology student's experiences in learning mindfulness: Benefits, paradoxes, and pitfalls. *Mindfulness*, 7(4), 838-850. <https://doi.org/10.1007/s12671-016-0521-0>
- Spahn, C., Strukely, S., & Lehmann, A. (2004). Health conditions, attitudes toward study, and attitudes toward health at the beginning of university study: music students in comparison with other student populations. *Medical Problems of Performing Artists*, 19(1), 26-34. Retrieved from <https://go.galegroup.com/ps/anonymous?id=GALE%7CA173230516&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=08851158&p=HRCA&sw=w>
- Specia, M., Carlson, L. E., Goodey, E., & Angen, M. (2000). A randomized, wait-list controlled clinical trial: the effect of a mindfulness meditation-based stress reduction program on mood and symptoms of stress in cancer outpatients. *Psychosomatic Medicine*, 62(5), 613-622. <https://doi.org/10.1097/00006842-200009000-00004>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

- Stubblebine, T. (2016). One trick to beat procrastination forever. *BetterHumans*.
Retrieved from <https://betterhumans.coach.me/how-to-overcome-procrastination-b8118060298d>
- Taylor, N. Z., & Millear, P. M. R. (2016). The contribution of mindfulness to predicting burnout in the workplace. *Personality and Individual Differences*, 89, 123-128. <https://doi.org/10.1016/j.paid.2015.10.005>
- Taylor, C., Harrison, J., Haimovitz, K., Oberle, E., Thomson, K., Schonert-Reichl, K., & Roeser, R. W. (2016). Examining ways that a mindfulness-based intervention reduces stress in public school teachers: A mixed-methods study. *Mindfulness*, 7(1), 115-129. <https://doi.org/10.1007/s12671-015-0425-4>
- Teasdale, J. D., Segal, Z. V., Williams, J. M. G., Ridgeway, V. A., Soulsby, J. M., & Lau, M. A. (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *Journal of Consulting and Clinical Psychology*, 68(4), 615-623. <https://doi.org/10.1037//0022-006x.68.4.615>
- Teasley, M. L., & Buchanan, E. M. (2016). When music goes up in flames: The impact of advising on music major burnout. *NACADA Journal*, 36(1), 43-53. <https://doi.org/10.12930/nacada-15-002>
- Thayer, J. F., Åhs, F., Fredrikson, M., Sollers III, J. J., & Wager, T. D. (2012). A meta-analysis of heart rate variability and neuroimaging studies: implications for heart rate variability as a marker of stress and health. *Neuroscience & Biobehavioral Reviews*, 36(2), 747-756. <https://doi.org/10.1016/j.neubiorev.2011.11.009>

- Thompson, B. (1996). AERA editorial policies regarding statistical significance testing: Three suggested reforms. *Educational Researcher*, 25, 26–30.
<https://doi.org/10.2307/1176337>
- Thompson, B. L., & Waltz, J. (2007). Everyday mindfulness and mindfulness meditation: Overlapping constructs or not? *Personality and Individual Differences*, 43(7), 1875-1885. <https://doi.org/10.1016/j.paid.2007.06.017>
- Tomfohr, L. M., Pung, M. A., Mills, P. J., & Edwards, K. (2015). Trait mindfulness is associated with blood pressure and interleukin-6: exploring interactions among subscales of the Five Facet Mindfulness Questionnaire to better understand relationships between mindfulness and health. *Journal of Behavioral Medicine*, 38(1), 28-38. <https://doi.org/10.1007/s10865-014-9575-4>
- Tops, M., Boksem, M. A., Quirin, M., IJzerman, H., & Koole, S. L. (2014). Internally directed cognition and mindfulness: An integrative perspective derived from predictive and reactive control systems theory. *Frontiers in Psychology*, 5. <https://doi.org/10.3389/fpsyg.2014.00429>
- Travers, C. J., & Cooper, C. L. (1996). Teachers under pressure: Stress in the teaching profession. New York, NY: Routledge.
- Vago, D. R., & Silbersweig, D. A. (2012). Self-awareness, self-regulation, and self-transcendence (S-ART): a framework for understanding the neurobiological mechanisms of mindfulness. *Frontiers in Human Neuroscience*, 6, 1–30.
<https://doi.org/10.3389/fnhum.2012.00296>

- Valentine, J. C., & Cooper, H. (2003). *What Works Clearinghouse study design and implementation assessment device (Version 1.0)*. Washington, DC: U.S. Department of Education.
- van den Hurk, D. G., Schellekens, M. P., Molema, J., Speckens, A. E., & van der Drift, M. A. (2015). Mindfulness-based stress reduction for lung cancer patients and their partners: Results of a mixed methods pilot study. *Palliative Medicine*, 29(7), 652-660. <https://doi.org/10.1177/0269216315572720>
- Van Eck, M., Berkhof, H., Nicolson, N., & Sulon, J. (1996). The effects of perceived stress, traits, mood states, and stressful daily events on salivary cortisol. *Psychosomatic Medicine*, 58(5), 447-458. <https://doi.org/10.1097/00006842-199609000-00007>
- van Holland, B. J., Frings-Dresen, M. H., & Sluiter, J. K. (2012). Measuring short-term and long-term physiological stress effects by cortisol reactivity in saliva and hair. *International Archives of Occupational and Environmental Health*, 85(8), 849-852. <https://doi.org/10.1007/s00420-011-0727-3>
- Varona, D. A. (2018). The mindful music educator: Strategies for reducing stress and increasing well-being. *Music Educators Journal*, 105(2), 64-71. <http://doi.org/10.1177/0027432118804035>
- Viafora, D. P., Mathiesen, S. G., & Unsworth, S. J. (2015). Teaching mindfulness to middle school students and homeless youth in school classrooms. *Journal of Child and Family Studies*, 24(5), 1179-1191. <https://doi.org/10.1007/s10826-014-9926-3>

- Vrijkotte, T. G., Van Doornen, L. J., & De Geus, E. J. (2000). Effects of work stress on ambulatory blood pressure, heart rate, and heart rate variability. *Hypertension*, 35(4), 880-886.
<https://doi.org/10.1161/01.hyp.35.4.880>
- Warsmith, S. (2013). Plain township school stops “Mindfulness” program after some in community raise concerns. *Akron Beacon Journal*. Retrieved from <https://www.ohio.com/article/20130414/NEWS/304149442>
- Weinstein, N., Brown, K. W., & Ryan, R. M. (2009). A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being. *Journal of Research in Personality*, 43(3), 374-385.
<https://doi.org/10.1016/j.jrp.2008.12.008>
- Yorston, G. (2001). Mania precipitated by meditation: A case report and literature review. *Mental health, religion, and culture*, 4(2), 209-213.
<https://doi.org/10.1080/13674670126962>
- Zeidan, F., Johnson, S. K., Diamond, B. J., David, Z., & Goolkasian, P. (2010). Mindfulness meditation improves cognition: Evidence of brief mental training. *Consciousness and Cognition*, 19(2), 597-605.
<https://doi.org/10.1016/j.concog.2010.03.014>
- Zhou, Z. K., Liu, Q. Q., Niu, G. F., Sun, X. J., & Fan, C. Y. (2017). Bullying victimization and depression in Chinese children: A moderated mediation model of resilience and mindfulness. *Personality and Individual Differences*, 104, 137-142. <https://doi.org/10.1016/j.paid.2016.07.040>
- Zimbardo, P. G. (1969). The human choice: Individuation, reason, and order versus

deindividuation, impulse, and chaos. In W. T. Arnold & D. Levine (Eds.),
Nebraska Symposium on Motivation (Vol. 17, pp. 237-307). Lincoln, NE:
University of Nebraska Press.

